ANNUAL REPORT

1982-83

The Department of Agriculture

84- 3213 /

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Manitoba Agriculture

Executive and Directors,

April 1, 1982 to March 31, 1983

Executive

Honourable Bill Uruski, Minister

R. C. Bailey, Deputy Minister

T. L. Pringle, Assistant Deputy Minister
Agricultural Development and
Marketing Division

C. C. Cranston, Assistant Deputy Minister
Farm and Rural Development Division

G. J. Lacomy, Assistant Deputy Minister
Management and Operations Division

G. J. Gartner, Executive Director
Policy and Economics Division

B. Dryburgh, Policy and Program
Coordinator

Directors

Administrative and Accounting Services —
R. L. Baseraba
Water Services — E. W. Griffin
Agricultural Crown Lands — G. T. Somers
Animal Industry — C. H. McNaughton
Communications — V. E. McNair
Agricultural Training — R. M. Deveson
Policy Development — C. Lee
Economic Analysis — F. L. Paquin
Marketing — A. E. Gascoigne
Personnel Services — D. H. Burch
Soils and Crops — T. A. Sandercock (Act.)
Technical Services — E. T. Oatway
Veterinary Services — J. A. McPhedran
Manitoba Marketing Board — R. Kapilik,
Secretary Manager
Manitoba Agricultural Lands Protection
Board — J. F. Muirhead
Central — G. A. Arnott
Eastern — F. J. Slevinsky
Interlake — G. D. Webster
Northwest — R. Chychota (Act.)
Southwest — J. L. Neabel

MANITOBA

MINISTER OF AGRICULTURE
WINNIPEG
R3C 0V8

To Her Honour,
Pearl McGonigal,
Lieutenant Governor for the Province of Manitoba

Your Honour:

I have the honour to submit herewith the Report of the Department of Agriculture for the period April 1, 1982 to March 31, 1983.

Your obedient servant,

Bill Uruski

Bill Uruski,
Minister of Agriculture

MANITOBA

DEPUTY MINISTER OF AGRICULTURE

WINNIPEG R3C 0V8

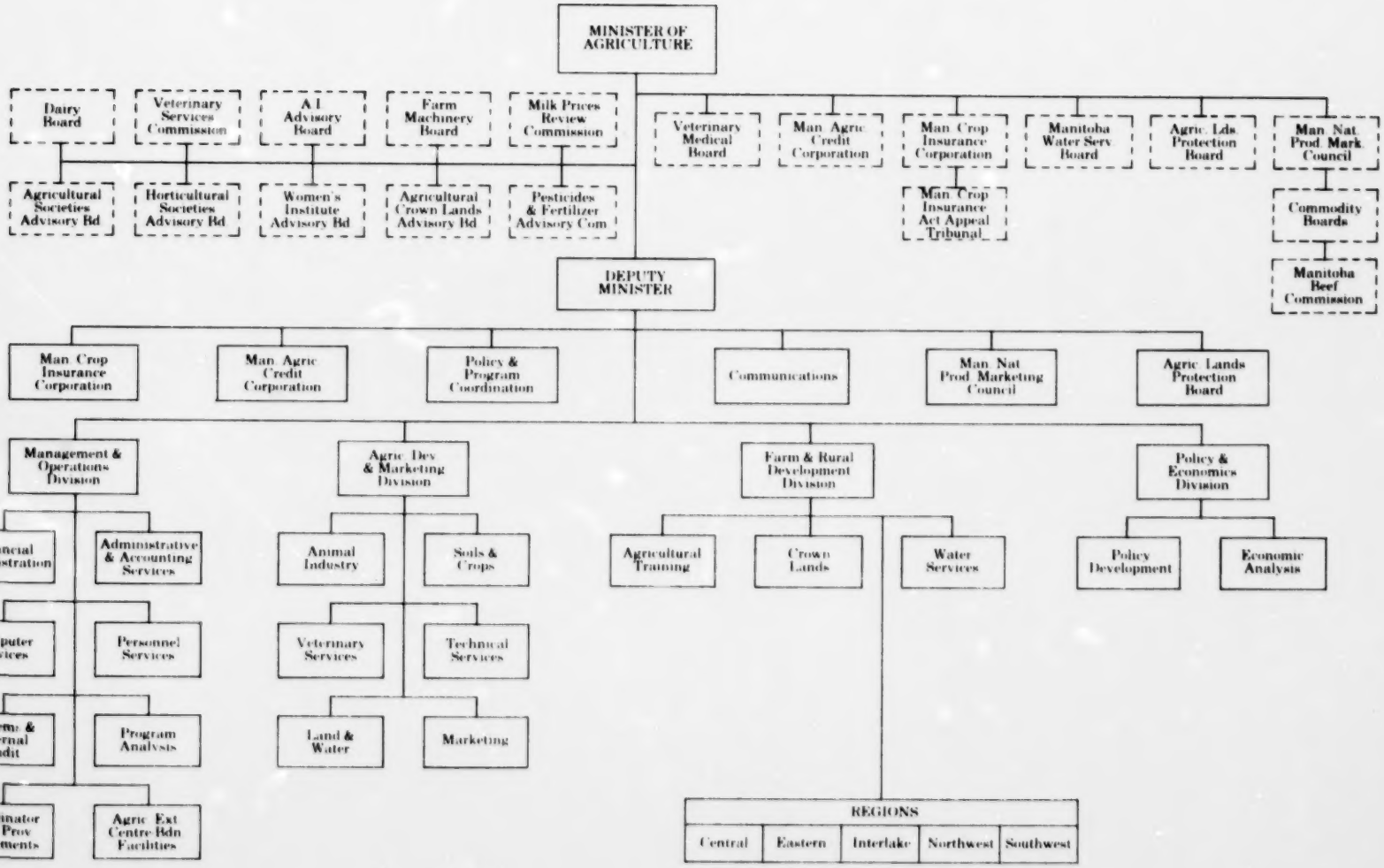
Honourable Bill Uruski,
Minister of Agriculture,
Province of Manitoba

Sir:

It is my pleasure to present the annual report of the Manitoba Department of Agriculture for the twelve month period ending March 31, 1983.

Respectfully submitted,

R.C. Bailey,
Deputy Minister.


MINISTER OF AGRICULTURE
Dairy Board
Veterinary Services Commission
A I Advisory Board
Farm Machinery Board
Milk Prices Review Commission
Agricultural Societies Advisory Bd
Horticultural Societies Advisory Bd
Women's Institute Advisory Bd
Agricultural Crown Lands Advisory Bd
Pesticides & Fertilizer Advisory Com
Veterinary Medical Board
Man. Agric. Credit Corporation
Man. Crop Insurance Corporation
Man. Crop Insurance Act Appeal Tribunal
Manitoba Water Serv. Board
Agric. Lds. Protection Board
Man. Nat. Prod. Mark. Council
Commodity Boards
Manitoba Beef Commission
DEPUTY MINISTER
Man. Crop Insurance Corporation
Man. Agric. Credit Corporation
Policy & Program Coordination
Communications
Man. Nat. Prod. Marketing Council
Agric. Lands Protection Board
Management & Operations Division
Agric. Dev. & Marketing Division
Farm & Rural Development Division
Policy & Economics Division
Financial Administration
Administrative & Accounting Services
Computer Services
Personnel Services
Systems & Internal Audit
Program Analysis
Coordinator Fed. Prov. Agreements
Agric. Ext. Centre-Bdn. Facilities
Animal Industry
Soils & Crops
Veterinary Services
Technical Services
Land & Water
Marketing
Agricultural Training
Crown Lands
Water Services
REGIONS
Central
Eastern
Interlake
Northwest
Southwest
Policy Development
Economic Analysis

General Administration

Manitoba Natural Products Marketing Council

In 1982-1983, the Manitoba Natural Products Marketing Council was responsible to the Minister of Agriculture for the administration of the Natural Products Marketing Act and the supervision of the following commodity marketing boards and commission operating thereunder:

The Manitoba Beef Commission

The Manitoba Chicken Broiler Producers' Marketing Board

The Manitoba Egg Producers' Marketing Board

The Manitoba Hog Producers' Marketing Board

The Manitoba Honey Producers' Marketing Board

The Manitoba Milk Producers' Marketing Board

The Manitoba Vegetable Producers' Marketing Board

The Manitoba Turkey Producers' Marketing Board

In the performance of its main function, the Manitoba Natural Products Marketing Council, through meetings, correspondence, perusal of minutes, reviews of financial statements and the prior approval of certain orders of the above Marketing Boards and Commission, has been assured that they were continuing to operate in accordance with the regulations prescribed in their respective Marketing Plans and the Natural Products Marketing Act.

The Council held twenty regular meetings, eight of which were attended by delegations, to review producer boards' respective policies, primarily relating to national agreements, quota administration, pooling and pricing practices.

A joint meeting of all commodity marketing boards, the Minister of Agriculture and Council took place to review policies relating to quota administration, national agreements, and amendments to the Natural Products Marketing Act. Council also met on two other separate occasions with the Minister of Agriculture to discuss government policy and mutual areas of concern.

A major review and restructuring of the Manitoba Egg Producers' Marketing Board's Quota Order was undertaken, which clearly defined policies into a Regulation.

Under the Act, the Manitoba Natural Products Marketing Council is required to hear appeals by persons affected by decisions, or orders made or given by a producer board. The Council heard eighteen appeals, sixteen by individual producers, primarily regarding quota reductions, one by an individual processor respecting milk pricing and one by the Manitoba Milk Producers' Marketing Board against the Milk Prices Review Commission respecting Class 1 milk pricing. Council dismissed eleven appeals, granted five in-whole and two in-part.

The Council experienced a change in membership with four members being added and one member deleted, for a total membership of six.

An election was conducted for one vacancy on the Manitoba Milk Producers' Marketing Board and two were filled by acclamation. The Annual Meetings of the producer boards were attended and elections supervised as required.

As signatories to Federal/Provincial agreements involving eggs, chickens, turkeys and milk, the Manitoba Natural Products Marketing council continued to take an active role in the reviews of the respective plans, as well as in the formulation of national policies respecting the aforementioned commodities.

In particular, the Council participated in discussions relating to the allocation of overbase quota for eggs, the allocation of the overbase quota for chickens and the Canadian Egg Marketing Agency's central pricing system.

The Natural Products Marketing Council continued with its policy of preventative enforcement. No court actions were taken during this year

Management Services

Administrative and Accounting

The Branch is responsible for provision of professional administrative, financial, and management accounting systems and services ensuring expenditure and revenue control over public funds.

The Accounting Services involves the orderly payment of the Department's accounts and the recording and management use of the data. Some of the major activities during the year were:

— assist in the planning, design and implementation of accounting systems for the Manitoba Beef Commission

— financial statement analysis on Agro-Man contracts, Weed Control Districts and other various grant recipients

— processing of 25,462 payment documents totalling $56,631,536.39

— processing of revenue transactions totalling $9,626,300.29.

Administrative Services involved the provision of essential professional support to facilitate program delivery. Some of the major activities during the year were:

— monitoring of the working of the direct purchase order system for local purchase

— coordination of records management, scheduling etc. throughout Winnipeg operations

— coordination of recruitment of both budget and S.T.E.P. summer student positions was again carried out this year

— implemented a special trainee rate for designated student positions

— processing of 2,018 requisitions for office supplies, advertising and office equipment

— preparation of contracts under Agro-Man.

— cost benefit studies on word processing applications were carried out for two locations

— review of Water Services Board organization, administrative practises, and amalgamation of two programs

Internal Audit and Systems

Internal Audit and Systems has the responsibility of undertaking reviews of existing and proposed financial and procedural program systems of the Department and related agencies. In addition, this position functions as a resource to senior management and offers advice in formulating policies which will ensure effective and efficient program delivery.

Activities for the year included:

- reviews of several program areas which resulted in making recommendations to improve operations in an economic, efficient and effective manner.
- an ongoing analysis of budget presentations of the Prairie Agricultural Machinery Institute and the Keystone Centre.
- involvement on various Committees and Boards to ensure program policies of the Department and central agencies of the Government were adhered to.

Personnel Services

Personnel Services provides advisory assistance to management and staff on the recruitment and selection of employees, wage and salary administration, employee relations and staff development and training.

Personnel Services provided leadership to the development of a Management Update program to enhance the continued development of our management expertise within the Department. This was integrated into our normal training and development programs that continued to emphasize farm management and program evaluation activities.

Personnel Services was very active in support of the establishment of the new Manitoba Beef Commission and also increased its involvement with our two Corporations, Manitoba Crop Insurance Corporation and Manitoba Agricultural Credit Corporation.

Computer Services

This activity is responsible for maintaining, enhancing and developing computer management systems that assist in efficient and effective operation of departmental programs.

A major computer development was initiated for the Manitoba Beef Commission to register producer sign up and subsequent pay out of the incentive grants and retroactive deficiency payments.

Other activity included the writing of a subsystem for M.A.C.C. to assist in the operation of the Interest Relief Program.

Three additional micro-computers (IBM PC) were acquired. Two of these will be installed in the regions to further test their effectiveness as tools to our field staff. Writing of software for these micros continues.

Three Word Processing units were also installed prior to year end. Their acquisition came as a result of prescribed Work Processing studies undertaken within a number of agricultural offices and M.A.C.C.

Program Analysis

Program Analysis activity provides internal support to the development and operation of the departmental program planning and budget development process, the development, operation and review of programs under federal-provincial agreements, reviews of specific departmental programs or activities and facilitates effective communication between management executive and operational staff. These activities are designed to assist individual staff, branches or regions and divisions to be more effective and efficient in program delivery.

During 1982-83 emphasis was placed on program/activity reviews and providing an inventory of departmental activities relating to commodity profiles of cereal and horticultural crops, forages and cattle production and marketing. Improvements in the district and regional program planning and reporting systems were developed through close liaison with regional directors and local staff. The branch anticipated a continuing coordination function in development and use of computers and Telidon as an extension education and counselling aid.

Program Analysis cooperated with the financial administrator and departmental directors and managers in preparing budget estimates and revenue expectation for the department including ministerial and Cabinet review.

Program planning and evaluation input was made with regard to the operations of the Canada/Manitoba Subsidiary Agreement on Value-Added Crops Production, Agro-Man.

Financial Administration

Financial Administration provided support to all divisions of the department. Activity centered on four major areas; annual estimates, sessional notes, cash flows and supplementary estimates.

The Department's annual estimates for the 1983-84 fiscal year were compiled through close cooperation with each director and presented to the Minister and Executive for review before Cabinet presentation. Sessional notes, describing the budget details for discussion by the Minister in the Legislature were prepared along with financial details at the appropriation level.

Continued emphasis was placed on estimating the monthly cash flow of expenditures and revenue at the program level for more effective reporting. Revised and supplementary estimates for the 1982-83 fiscal year were compiled for unforeseen and emergency expenditures.

Financial reports, expenditure codes, unique codes and other related matters were developed.

Agricultural Research

University of Manitoba

During the fiscal year, Manitoba Agriculture provided a grant of $850,000 to the University of Manitoba in support of the University's agricultural research program. The grant was used for the development and maintenance of the University's central research station at Glenlea. Funds were used, as well, to provide operational support for research projects carried out in all major disciplines, including agricultural economics and farm management, agricultural engineering, animal science, entomology, food science, plant science and soil science.

Manitoba Agricultural Services Coordinating Committee (MASCC)

Staff from the Department participated in the activities of the Manitoba Agricultural Services Coordinating Committee (MASCC). MASCC is an advisory committee, which recommends on methods of improving the quality of agricultural services provided to farmers and others in the agricultural industry. The Committee is chaired by the Deputy Minister of Manitoba Agriculture, and its membership includes representatives from the University of Manitoba, Agriculture Canada and Manitoba Agriculture. Input into formulation of recommendations is also provided by farmers and representatives from agri-business.

In 1982-83, MASCC approved recommendations pertaining to both research and to non-research development. Recommendations of national significance were forwarded to the Canadian Agricultural Services Coordinating Committee (CASCC). Those of primarily provincial significance were directed to provincial agencies, including the Department of Agriculture, for consideration and implementation.

General Support Services

Pami

The Prairie Agricultural Machinery Institute is a joint venture of the provinces of Manitoba, Saskatchewan, and Alberta. It was established in 1974 to evaluate farm machinery and to carry out development work to improve the design of farm machinery in the prairies. The Institute has facilities at Humboldt, Saskatchewan; Lethbridge, Alberta and Portage la Prairie, Manitoba.

All test reports published by the Institute are provided to subscribers at a cost of $5 per year. There are 13,000 subscribers. Individual test reports are available at no charge upon request from the Prairie Agricultural Machinery Institute, P.O. Box 1900, Humboldt, Sask. S0K 2A0.

The government of Manitoba made a grant of $525,000 to PAMI for the year 1982.

Manitoba Farm Machinery Board

The Manitoba Farm Machinery Board is charged with the administration of the Manitoba Farm Machinery and Equipment Act. The Board's major programs and activities were maintained in a continuing effort to improve services to the farmer user.

The inspection of dealerships received greater emphasis in 1982-83 with 325 dealer inspections being carried out. The performance ratings reached during inspection were based upon the classification of equipment sold, parts stocking and service facilities supplied and required by the dealer.

In November, the Board commenced its licencing renewal program. As of March 31, 1983, the Board had issued 482 dealer licences which included the licencing of 16 new dealers. There were 108 dealers bonded under the Manitoba Farm Machinery and Equipment Act Fund. The Board also issued 163 vendor licences which included the licencing of 14 new vendors. There were 43 vendors bonded under the Manitoba Farm Machinery and Equipment Act Fund. The Manitoba Farm Machinery and Equipment Act is administered by the Manitoba Farm Machinery Board.

A total of 153 complaints were received and processed by the Board. Greater awareness by both dealers and vendors, combined with shorter delivery times on repair parts, will hopefully reduce the number of complaints received during the next fiscal year.

One hundred and eighty applications for leave to repossess were filled and processed by the Board which is an increase of 32.22% over the previous year. Approximately 80% of the repossessions processed, covering various units of farm machinery, were not repossessed as arrangements were made between the purchaser and lienholder for a mutually satisfactory settlement.

The Board has assisted the Assiniboine Community College in developing a two-year Farm Machinery Mechanics Course. The Board has a member representative on the Assiniboine Community College Advisory Committee.

The Manitoba Farm Machinery Board held nine board meetings and several arbitration meetings during the year. Board members and administration personnel attended several special meetings, including arbitration meetings to resolve and settle complaints, advisory and special meetings in connection with the farm machinery mechanics course and meetings with manufacturing associations.

Communications

Communications services for the department are coordinated through the Communications Branch and through the communications specialists in the regions. This support is provided for all policies, activities and programs of the department. Direct general support is provided on a daily basis through the mass media. Department staff support is provided in the audio visual and print media, through provision of a wide range of instructional and communications aids.

Print Services

Press — Each week of the year a press bundle was issued involving in total some 286 releases which were distributed to 775 recipients. In addition 51 Intercoms were distributed to departmental staff as an internal information service. Specialized press coverage was provided for such major activities as Manitoba Agronomist Conference, Weed Fairs, Hog Days, Grain Days and the Farm Management '83 homestudy course. During the year extensive support was provided in the print area to the newly established Manitoba Beef Commission.

Publications — Some 300 print projects were

coordinated by the publications section this year. An increased emphasis was placed on two to four page factsheets to meet an increasing demand. On every project from factsheets to one-hundred page publications, branch services ranged from writing and design to printing arrangements and distribution. In most cases technical content was provided by department specialists.

The Branch's Distribution Centre continued to handle the distribution of all publications, in cooperation with the department's 40 rural offices. During the year some 525,000 copies of publications were distributed to the public.

Audio Visual Services

Radio — The department's radio service involved all radio stations in rural Manitoba and some Winnipeg stations for some services. Agricultural information was provided on a daily basis through 12 stations with the program "Country Comment". "Consumer Update" provided a similar service on consumer topics. During the spring and summer months a weekly insect report was issued on radio, and three items per week on horticultural hints were carried by city and country stations. In addition to the regular department radio services, numerous special items were produced when timely. Most notable of them was the series of five programs produced under the title "Survival '83", based on the farm financial outlook for the season.

Television Service — The department's TV program "Farm Scene" was again run weekly through the fall-winter season on a province-wide basis. Content ranged from farm news and technical agricultural items to rural community activity. A weekly regional half-hour program called "Agri-news" was produced by the Northwest regional staff and telecast in that region. A TV special called "Farming Today — Risk & Survival" was produced as an updating on the farm financial situation in early 1983.

Film Production — Extensive 16 mm film production continued mainly in support of the department's regular television services. During the year some 50,000 feet of film was shot for such use. A small number of short films were produced for use other than television.

Graphic Design — Branch graphic design and production continued to fill an increasing demand for such service from throughout the department. This service supported projects in films, slide sets, television, overhead transparencies, publications, press releases and displays.

Still Photography — The still photography services of the branch continued to fill a specific need in the production of television, publications, slide sets, homestudy lessons, displays and press service. Numerous additions were made to the growing file of still photos which are available to the entire department. Fourteen slide/tape productions were completed during the year.

Audio Visual Library — Some 240 films and slide sets are on deposit in the branch's Distribution Centre. These are available to staff and the general public. During the year bookings of these materials totalled 1,852.

Promotion and Advertising

The Communication Branch continued to handle most advertising done on behalf of the whole department and on many special projects. During the year major advertising and promotion activity was carried out on tissue testing service, fall soil testing, Manitoba Beef Commission topics, Hog Days, Weed Fairs, Farm Management '83 homestudy course, Outlook conference and Grain Days.

Farm Management '83 Homestudy Course

The Farm Management '83 course produced this year was the fourth course in the homestudy pattern produced and coordinated by Manitoba Agriculture. A registration of 2,970 indicated a most successful course. A follow-up evaluation study showed strong support for the farm management course and 92 per cent of the respondents stated they would take further courses offered in the homestudy pattern.

Telidon Service

The department continued with considerable involvement in the Grassroots telidon service established for Manitoba farmers. During the year department originated material grew to some 600 pages, with some of the updating done on a bi-weekly basis. Late in the fiscal year demonstrator terminals were removed from rural offices and 20 new terminals were purchased by the department for most of those locations.

Regional Communications Services

Each of the five regions has a communications specialist on staff to coordinate communication services on behalf of the entire

region. While available media varies from region to region, all existing media outlets are used on a regular basis for dissemination of information on Department policies, programs and activities.

These regional specialists provide an advisory and consultative service to regional staff on most communication matters. In addition, they are regularly involved in production of a wide range of items for release through media outlets. These projects include broadcast television, closed circuit television, radio, photography, press reports, newsletters, publications, advertising and the maintenance of media relations.

Communication coordinating committees have existed in most regions in some form. The Northwest committee was most notable in its support of daily radio items and a weekly television program directed specifically at the residents of that region. The committee also supplied support to regional press and other services. Regional home economists were involved in a weekly television program broadcast on both Dauphin and Brandon TV stations.

Other regional communications services included regional advertising, general promotion and public relations related to regional interests and a support to many Communication Branch projects. All regional communicators were involved in the development of program communication strategies and were later each assigned to implement one major strategy.

Policy Development

In late 1982 the Economics Branch of the Policy and Economics Division was reorganized into two branches — the Economic Analysis Branch and the Policy Development Branch.

The Policy Development Branch conducts research, analyzes issues and assists in the long-range policy and program planning of the Department. These responsibilities include a) analysis of conditions and factors affecting the farm and rural community, b) evaluation of Departmental programs and their effects on the agricultural economy, and c) negotiations and discussions relevant to interdepartmental and intergovernment projects and agreements.

In 1982-83 major emphasis was placed on (1) defining the financial structure of farms in Manitoba and developing policies to strengthen the family farm including financing, credit needs and availability, (2) research and analysis of freight rate structures and the transfer costs in relation to the development of the livestock industry and further processing in Manitoba, (3) planning and drafting of the administrative framework for the Manitoba Beef Income Stabilization Plan and the Manitoba Hog Income Insurance Plan, and (4) updating cost-of-production models for both stabilization plans.

Economic Analysis

Commodity Analysis

The Economic Analysis Branch prepares and distributes up-to-date marketing information to producers. Department staff have ready access to North American market trends through Reuters, I.P. Sharp, U.S.D.A. and local marketing authorities.

Information is prepared and distributed weekly through a newsletter, "Manitoba Markets". It offers reports on grain, special crop, oilseed and livestock prices. Periodic situation and market outlook reports are prepared for grains, oilseeds, special crops, cattle, hogs, dairy, chicken, eggs and sheep production. These reports are distributed to interested producers, researchers and agri-business representatives.

Outlook Conference

Manitoba Agriculture's annual Outlook Conference follows the national conference held in Ottawa and is intended to provide a more regionalized view of future prospects in the industry. The Conference is one of the Department's major extension forums providing Manitoba producers with information on marketing trends. The 1983 Outlook Conference was held at Brandon and Winnipeg.

Food Marketing

This section conducts research, analysis and extension activities in all areas of food economics from the farm gate to the retail market in Manitoba.

Major research activities dealt with the comparison of food prices among Winnipeg food chains, in various Manitoba communities, between Winnipeg and Canada and amongst world capitals. Food consumption trends and food expenditure statistics are offered. Various Manitoba agriculture commodities were investigated from the farm gate to the retail market.

A weekly newsletter "Manitoba Food Market Review" reports producer, wholesale and retail food prices and price spreads for 20 Manitoba food items. Each issue contains a commentary on food market trends and outlook as well as a short article on some part of the food marketing chain.

A quarterly review "Manitoba Food Situation and Outlook Report" presents a compilation of food prices during that quarter together with a forecast of prices to be expected in the next quarter.

International Trade

This service provides research support to the Marketing Branch and other departmental staff on trade restrictions, regulations and market potential of various products. Livestock and meat trade prospects of major trading countries and Manitoba's markets and regions of potential for specific products in the United States were evaluated. Information was gathered on such subjects as Japanese imports of pork, Manitoba goose production and trade, geranium oil world production and trade, as well as soybean, buckwheat, wild rice, and raspberry production in Canada and exports to other countries. Responsibility for this section was transferred to the Marketing Branch as part of their overall market analysis and development responsibility.

Statistics

The Statistics Section's major responsibility is to acquire and provide selected data on Manitoba agriculture for use by the Manitoba government and its staff, the Federal government and its staff, farm organizations and farmers, researchers and the general public.

During the period under review the Section prepared the following publications for distribution to the agriculture industry:

- 1981 Yearbook of Manitoba Agriculture.
- Manitoba Agriculture Statistics Factsheet.
- A Look at Manitoba Agriculture.
- Weekly Crop Reports.
- Monthly Agricultural Conditions Reports.
- Statistical reports on crop and livestock production.
- Statistical reports on land prices and per capita consumption of food.
- Statistical reports on farm finances — receipts, expenses, income, value of production, wages and indexes.
- Monthly Dairy Reports for Statistics Canada.
- Reports on corn, special crops and herbicide surveys carried out by the Section.
- Report on the vegetable survey in conjunction with Statistics Canada.

The Section assisted Statistics Canada in preparing final estimates on many of the crop and livestock statistics prepared and released by that organization. The Section maintained close contact with the Agricultural Statistics Division of Statistics Canada and other provincial agricultural statisticians on statistics problems affecting the statistics programs of Manitoba Agriculture.

Marketing

The Marketing Branch of the department undertakes the identification, development and expansion of markets for Manitoba grown and processed agricultural commodities. These activities take place domestically, nationally and internationally, and involve market development and promotion.

Throughout the year, the Branch was involved with 30 incoming agricultural missions from many parts of the world, including Japan, France, Mexico, Hong Kong, China, Germany, USA and others.

Again this year, marketing staff initiated and coordinated promotional activities designed to increase the awareness and consumption of Manitoba grown and processed foods. This is undertaken by working closely with marketing boards and producer associations, food processors, manufacturers and brokers and the retail/wholesale food industry.

A multiple commodity industry and province-wide program called the Manitoba Food Products Event was carried out again, with the theme "Take Home Manitoba Grown", utilized on full colour in-store banners, special grocery bags, a new television commercial and in newspaper ads of all major retail food chains.

During the year the Marketing Branch participated in the Canadian Fruit and Vegetable Wholesalers Convention (Vancouver); the American Port Congress (Kansas City); Agribition (Regina); Red River Exhibition (Winnipeg); the Royal Manitoba Winter Fair (Brandon); Clearsprings Shopping Mall

(Steinbach) and other shopping mall promotions. In addition, staff participated in livestock exhibitions, domestic and international trade shows and missions, fairs, home shows and similar events. Numerous single commodity promotions, plus a number of multiple commodity promotions gave good exposure to Manitoba grown and processed commodities.

The Branch also provided marketing assistance through the development of brochures including two full-colour brochures on Manitoba pork and swine breeding stock, prepared in three languages Japanese, Spanish and English. This was a cooperative project with the Manitoba Hog Producers' Marketing Board and the Manitoba Swine Breeders' Association.

Other promotional materials produced included the Manitoba Food Products Directory, brochures on U-Pick strawberries, lamb, honey, the "Take Home Manitoba Grown" recipe booklet, a 16 page feature in Canadian Living magazine, a Manitoba livestock fact sheet, a Manitoba Swine Breeding Stock fact sheet, 1983 Fresh For Flavour Foundation promotional calendar and a slide presentation on poultry and chicken for use in Japan.

Feed Testing Laboratory

The Feed Analysis Laboratory serves the Manitoba livestock industry by assisting livestock operations through improved nutritional programs for farm animals.

The laboratory analyzes feed samples submitted by livestock producers, feed companies, veterinarians, department staff and others. Chemical analyses are forwarded to the animal or poultry nutritionists for interpretation and comment.

For the year, the laboratory analyzed 610 samples of grain, 2,242 forage samples, 639 complete feed and 2,142 unclassified samples, for a total of 5,833 samples. These samples were tested by 21,142 analyses, a 12% increase over 1981.

Animal Nutritional Services

This service ensures that producers and owners of all species of animals have available the most up-to-date technical information on nutrition and nutritional practices. Detailed and easily interpreted feeding recommendations are provided in response to results of feed analysis.

Modern, efficient nutritional practices to support farmers in maximizing their returns are recommended. Preventative management and humane treatment of animals is encouraged.

For the year, approximately 1,600 feeding recommendations were made based on 3,828 feeds tested. A rapidly increasing percentage of producers are recognizing the value of and using this nutritional service in developing their total feeding program. The service this year has been especially popular with dairy and swine producers. On a commodity basis, recommendations sent out were: beef 44%, dairy 33%, swine 21%, and horses, goats and sheep 2%.

In addition to written recommendations, nutritional information was disseminated via on-farm consultations, commodity group workshops, the media, and local and regional meetings.

Livestock Management and Marketing

Dairy

Sales to the Manitoba Milk Producers' Marketing Board and provincial creameries reached 295.4 million litres, an increase of 2.0 per cent from 1981/82. Fluid milk sales were 103.6 million litres, up 0.2 per cent. Farm separated cream production increased 5.0 per cent to 33.4 million litres milk equivalent. Industrial milk was increased by 2.0 per cent to 158.5 million litres.

Farm Cash Receipts — Dairy farm cash receipts including subsidy payments totalled $116.44 million. Payments from the Manitoba Milk Producers' Marketing Board and the creameries reached $105.83 million, comprised of $101.37 million from milk sales and $4.46 million from farm separated cream sales. The price paid to milk producers rose from $39.20/hl in April 1982 to $40.46/hl in March 1983. Creamery payments rose for farm separated cream from $3.64 per kg. in April 1982 to $3.75/kg. in March 1983.

Subsidy Payments — Subsidies are based on eligible market share quota shipments made within the dairy year. Manitoba Market Share Quota allotment dropped to 6.437 million kg. of butterfat as of January 1983. The subsidy remained unchanged at $6.03/hl for milk testing 3.5% butterfat. Support prices for butter and skim milk powder were set at $4.33 and $2.59 per kg., respectively, on August 1, 1982. These increased to $4.42 and $2.65/kg. on April 1, 1983. Manitoba received

$10.609 million in subsidy payments. However, in quota levies of $3.05/hl, $4.07/hl and $4.70/hl effective April 1, 1982, August 1, 1982 and January 1, 1983, respectively, and the 30.15¢/hl skim off levy on Class I shipments resulted in a total deduction from milk producers of $5.899 million. A net subsidy payment of $4.72 million was realized. The over quota levy was set at $20.21/hl on April 1, 1982 but due to surplus production was raised to $27.95/hl on January 1, 1983.

Breeding

Manitoba Agriculture supports two milk recording services, the Dairy Herd Improvement Association (DHIA) and the Owner Sampler (O/S) program to improve the production performance of dairy cattle in the province.

Dairy Herd Improvement Associations (DHIA)

During the calendar year of 1982, the DHIA program continued to show growth in the twenty existing associations. The 17% increase in membership consisted of 2 herds transferred from ROP, 18 herds transferred from the Owner Sampler program, and 40 new herds for an increase of sixty herds on the program. Only 16 herds discontinued the program during the year, for a net gain of 44 herds and an active membership of 266 herds on test at year end.

The DHIA grant system of $3.00 per cow per year and 75¢ per herd mile, which is paid directly to the DHI Associations, remained in effect. Producers continued to show interest in the official DHIA program with 21 new herds qualifying.

Annual meetings and record keeping workshops were held with all 20 associations along with several training workshops for the DHIA supervisors, explaining a proposed new grant structure for the next fiscal year.

National Identification Program (NIP)

Producers continued to positively identify some of their grade animals. Numbers of animals identified since the program started are as follows:

1977 - 1,265	1980 - 1,834
1978 - 1,713	1981 - 2,587
1979 - 1,535	1982 - 2,590

TABLE 1
Official DHIA Herds

	1981	1982
New Herds Qualifying	15	21
Discontinuing Herds	3	2
Herds Official at Year End	28	47

DHIA Summary (1981 - 1982)
(January 1 to December 31)

	1981	1982
Associations in operation	19	20
Herds on test for 12 months	162	207
New herds on test	62	60
Discontinued herds	16	16
Total herds on test during the year	238	282
Total herds on test on December 31	222	266
Cows on test on December 31	10,685	13,318
Average kg. milk per cow	5,829	5,777
Average kg. fat per cow	198	197
Average B.C.A. milk per cow	123.1	123.0
Average B.C.A. fat per cow	112.2	112.5
Composite B.C.A.	117.7	117.75
Percent of herds on test	17.8	21.8

TABLE 2
Owner Sampler Summary (1981 - 1982)

	1981	1982
Herds on test for 12 months	86	84
New herds on test	32	23
Discontinued herds	23	35
Total herds on test during the year	139	139
Herds on test December 31	116	104
Cows on test December 31	5,076	4,512
Average kg. milk per cow	5,330	5,481
Average kg. fat per cow	184	191
Average B.C.A. milk	116.6	117.5
Average B.C.A. fat	106.8	109.3
Composite B.C.A.	111.7	113.4
Per cent of herds on test		8.5

Owner Sampler

Cows on Owner Sampler (O S) decreased in 1982 reflecting a 11.1 per cent decrease in cows on test and a 10.3 per cent decrease in herds on test. Production on a per cow basis increased slightly due to the large consolidation of herds. Eighteen O S herds were transferred to DHIA during the year.

Nutrition

Over 25 per cent of the province's dairy producers requested feed analysis and feed recommendations. A project, utilizing the Agnet Computer Feed Analysis Program, was carried out in the Eastern Region in cooperation with the Eastern Grassland Society. Detailed, least-cost rations were developed utilizing both home grown and purchased feed supplies. A series of nutrition workshops, emphasizing dry cow nutrition and management, calf nutrition, feeding for production, and ration formulation were held. Holstein clubs from each region held a number of barn clinics and tours covering all areas of dairy management.

The butterfat-protein inversion program was continued. When butterfat is lower than protein on sample tests producers are notified and provided with information on how to correct the problem. There was a further reduction in the number of producers experiencing inversions in 1982, as compared to 1981 (4% vs 5.4%).

The "Production Dollar Index" (PDI) is now distributed semi-annually to all diary producers in the province. PDI is a report summarizing the most recent production and type information for all proven dairy bulls in Canadian bull studs. Presentations on sire selection and the use of PDI were made at producer meetings, two A.I. courses, and a one-day refresher A.I. school.

Marketing Dairy Breeding Stock

The Marketing Branch staff continued negotiations with Mexico regarding purchases of bred grade Holstein Friesen, Jersey and Brown Swiss heifers. However, due to the devaluation of the Mexico peso in March 1982, proceedings came to a halt, at least until the economy in Mexico recovers.

Market development work continued with the Manitoba Hereford, Jersey and Simmental Associations with assistance on sales to the U.S.A. Possibilities of Brown Swiss embryo transplants to improve the basic dairy herd in St. Vincent are being studied with the Department of Agriculture, dairy management and the Food Manufacturing Corporation staff in that country.

Requests from Spain and Korea for quotes on Manitoba slaughter ready cattle and heifers were responded to in cooperation with a local exporter.

Buildings and Material Handling

The design and construction of dairy calf and heifer housing was the area of greatest emphasis. In the past year 129 dairy plans

were distributed throughout Manitoba. A number of tours and barn clinics were held in each region to visit various facilities to discuss calf housing, ventilation, feeding and manure handling systems. The major changes in feeding systems in free stall barns was the introduction of computerized feeding and management equipment. Three such systems were installed on dairy farms in 1982. "Tingle" or transient voltage problems were discussed by Manitoba Hydro at a number of dairy producers' meetings throughout Manitoba.

Dairy Laboratory

Microbiology — Producer samples and processed dairy products are tested for total bacteria counts, coliform counts and bacterial inhibitors (antibiotics). Tests for added water in raw and finished products are also performed.

For the year 23,000 total bacteria counts, 5,400 coliform counts, 24,900 tests for inhibitors and 18,400 tests for added water were made. Yeast, and mould and proteolytic counts on butter, keeping quality tests and phosphatase tests on fluid milk products and staphyloccoccus counts were done on selected samples of both raw and finished products. In total 93,000 tests for routine and special analysis were completed.

Milk Composition — Output in this area increased again this year. The main increase was in the DHIA and Owner Sampler area. This once again more than offsets the decline in producer payment samples that continue to be analyzed weekly for milk fat, protein and lactose. Analysis of all individual cow samples submitted under the Owner Sampler and DHIA programs were conducted monthly and fluid milk product analysis was done once weekly. In total 206,895 analyses were performed.

Chemistry — Manitoba Agriculture's program monitoring herd samples for somatic cell levels to aid in the detection of mastitis, continued, compositional analysis of various processed products were performed and an evaluation of flavour problems in both raw milk and finished dairy products took place. There were 16,000 analyses conducted. 250 litres of 1/10N NaOH, 20 litres indicator and 2 litres .088N $AgNO_3$ was prepared and standardized for use by the dairy plants.

Processor Services

Inspections of Manitoba's dairy plants and depots took place under this activity. In-depth inspections on industrial plants were conducted in conjunction with Agriculture Canada while inspections of fluid plants were conducted by Manitoba Agriculture. Follow-up inspections are made where necessary. Three hundred and ninety-seven plant and depot inspections were completed.

Including seminars and meetings, 277 calls were made to plants regarding product quality. There were 2,658 tests for quality and composition of farm separated cream, and 38 bulk wash-up station evaluations conducted. Inspections were made of 10 margarine storage facilities and one margarine manufacturing facility. Random sampling and testing of 24 samples of margarine were conducted. Thirty-three consumer complaints were received, with 12 plant contacts or visits resulting. Approximately 2,500 litres of contaminated dairy products were recalled.

The quarterly newsletter "The Clarifier" continues to be published for distribution to processors.

Farm Services

As of March 31, 1983 there were 1,217 milk producers in Manitoba compared to 1,247 on March 31, 1982. During the year 3,373 farm visits were made related to quality milk production, equipment assessment and sanitation control of premises and surroundings. While making visits a cow count inquiry was made as to numbers of cows milking, dry cows and bred heifers. At year end 70% of the producers have been recorded.

The field staff has assumed the responsibility of collecting and forwarding to the Dairy Laboratory 4 Owner Sampler routes on a regular schedule of 10 times per year.

Staff participation in regional producer meetings was carried out featuring mastitis control, quality milk and production. The mean somatic cell count continues to show a downward improvement with the Provincial average for 1982-83 at 612,000. Forty-seven point two per cent (47.2%) of all samples tested were under 500,000/ml and 88.3% were under 1,000,000/ml.

The incidence of bacterial inhibitors and added water continues to remain at less than 1% for samples tested.

Milk transportation inspection including bulk milk tankers, driver evaluation and raw milk sample holding facilities totalled 348 inspections and/or appraisals.

A 3 day driver training course was conducted in conjunction with a 4 day bulk milk receivers course. A total of 40 persons enrolled. Two

driver refresher courses were held; one in Winnipeg and one in Brandon.

The field staff benefited from a 4 day seminar on milking equipment conducted by the Babson Company in Chicago Ill. Also a 3 day in-service session was held with Dr. Greg Blank, University of Manitoba Food Science Department, on dairy microbiology.

Agro-Man

The Canola Meal Agro-Man Project dealing with the use of canola meal in dairy cow and growing-finishing hog rations was completed. The data is presently being analyzed and compiled for release for extension meetings. Preliminary data was presented at a number of producers' meetings.

A particularly successful dairy calf housing demonstration carried out in the Eastern Region under Agro-Man saw calf mortality drop from 20 to 2 per cent.

Dairy Goats

Four dairy goat producers were enrolled in an Owner Sampler milk recording program for one year with an additional four goat producers enrolling at the end of 1982. The program is administered provincially in cooperation with the Canadian Goat Society and MacDonald College.

The Eastern Manitoba Goat Association was organized, carrying out a number of activities on synchronized breeding of does, A.I. herd health, and nutrition. The newsletter "Capri-Lines" was printed and distributed to goat producers.

Beef

The beef cattle industry is an important part of Manitoba's agricultural sector, with farm cash receipts representing 18 per cent of total farm cash income. Most regions report the difficult economic times have prompted many beef producers to take steps to improve their efficiency. The high number of beef producers signing up for the new Manitoba Beef Stabilization Program indicated they saw this as one answer to the problem of cyclical income.

Beef producers include dairy operators, cow-calf operators, cow-calf and feedlot operators or feedlot operators. Of Manitoba's 14,000 beef producers, 24 per cent are fluid milk or cream shipping operations, 41 per cent are cow-calf operations, 34 per cent are cow-calf and feedlot operations and one per cent have feedlot operations.

Nutrition

Approximately 700 detailed feed recommendations on 1,700 feed samples were prepared and sent out to beef producers. In addition, follow-up services and nutritional ration information was supplied in response to producer requests. In the fall of 1981, 137 lightweight heifer calves (172 kg.) entered the Livestock/Forage Research Application Farm at Gunton. The purpose was to demonstrate the value of processing immediately upon arrival, antibiotics in the feed during the first 28 days after arrival, and the processing of forages. Animals were finished in drylot or on pasture, and marketed on visual assessment of their finish.

Results showed no difference between processing on arrival or after three weeks, and the antibiotic trial was inconclusive. No advantage was shown in processing good quality hay. Animals on pasture had lower average daily gains and took longer to finish than animals on grain in drylot.

In addition, 18 heifers were brought from Glenella in the Central Region to the Gunton Project and put on pasture. Gains were compared with equivalent animals on equivalent pasture at the Glenella site. In past years animals at Glenella have made very poor gains considering the quality and amount of pasture available. This was not the case this year and there were no appreciable differences between the cattle grazed at either site.

All cattle used in these demonstrations are owned by cooperator-farmers who bring their cattle to the project site and pay a fee to defray feed costs. Participation by individual producers maintains a high level of interest in the management techniques being demonstrated. Producers are kept current on project developments via newsletters and several open house days.

Breeding

Total efficiency of beef production is very important to producers faced with the present high costs of production. Breeding programs are aimed at increasing total efficiency through genetic improvement and use of current technical information.

A cow-calf project on the Marco pasture emphasized breeding and health management, with pasture management continuing to be a major part of the program. Results of the project have been widely used in general

extension programs and through tours and pasture visits.

Federal-Provincial Record of Performance (ROP)

This program is used by producers as a within-herd evaluation of animal performance. The number of herds participating increased in 1981-82 when a revised program was offered.

Progeny Proving Program (PPP)

PPP is intended to improve the genetic performance in Manitoba beef herds by selecting the top gaining bulls out of the Manitoba Bull Test Station and offering semen from the bulls to cooperating herds.

These superior bulls are identified for future use in artificial breeding. As a result, artificial ins[illegible]inations in beef herds have increased. [illegible]nen from superior bulls is also being use[illegible]at the Douglas Heifer Project, the Ashern G[illegible]asslands Project and the Marco Grassland Association.

Progeny proofs were completed on four bulls test mated in 1978 and 1979. All were plus proven for weaning weight and the two Charolais bulls ranked in the top 15 per cent of their breed. The Angus bull was the second easiest calving bull evaluated.

Sons of the test bulls are returning to the Manitoba Bull Test Station and achieving superior gains. Daughters of test sires are also weaning heavier than average calves.

Four new bulls were added to PPP in 1982, including a Maine Anjou and Red Angus bull for the first time.

TABLE 3
Number of herds and recorded weaning weights (WW) and yearling weights (YW) for 1978-82

YEAR	HERDS	WW	YW
1978-79	385	14,027	11,053
1979-80	428	15,621	10,980
1980-81	375	14,923	10,135
1981-82	451	18,997	11,206

TABLE 4
Summary of the Progeny Proving Program (PPP)

	1978	1979	1980	1981	1982
Number of bulls selected	6	3	4	5	4
Number of test herds enrolled	47	29	23	28	28
Number of calves completing records					
Number born	487	370	240	193	N/A
Number with weaning weights	470	362	232	148	N/A
Number with yearling weights	356	332	223	N/A	N/A

Bull Test Stations

Interest in station testing bulls increased substantially. A total of 812 bulls completed test, including 551 from the Manitoba Bull Test Station, 51 from the Limousin, 42 from the Maine Anjou, 75 from the Red Power, 25 from the Blonde d'Aquitaine, and 68 from the North West Manitoba Bull Test Station.

A total of 320 bulls from all stations were sold following the test. Bulls had to meet minimum performance and scrotal circumference standards. Most of these bulls were purchased by Manitoba breeders and ultimately will improve growth potential in their herds.

Manitoba Agriculture paid a $50 per bull

incentive grant to producers at eligible stations. A total of $28,350 was awarded to contributors providing home test data through a recognized program. Birth weight, calving ease and weaning weight information were made available so breeders could more accurately evaluate the total genetic worth of the bulls.

Douglas Beef Heifer Testing Project

1982-83 was the third year of the five year project. The object is to demonstrate a management system to ensure that heifers are of size and condition to breed as yearlings. This results in an improvement in efficiency over the norm on many farms where there is extra cost and lost production through breeding as two year olds.

Additional management demonstrations included a synchronized artificial insemination breeding program, methods of heat detection and use of a new ear tag available for fly control.

Awards Program

The Beef ROP Awards Program was initiated to recognize outstanding achievement of individual beef producers. The 1982 award was presented to Len Bergman, a commercial cattle producer, who demonstrated the effective use of production and performance records in achieving his breeding goals.

Buildings and Materials Handling

Building plans and extension information was provided to many beef producers. Plans for handling facilities, feeding equipment and loose housing barns comprise the bulk of the engineering assistance provided. In the past year 443 beef plans have been distributed throughout Manitoba.

Marketing — Beef Breeding Stock

Beef Cattle Breed Association members and Department Marketing staff, met on a continuing basis to develop programs and marketing strategies which are forwarded along with international market information to local exporters and buyers from Central and South America. The devaluation of the Mexican peso caused a postponement of several marketing projects in that country.

A Manitoba Certified Pre-Conditioned Feeder Program was developed by Manitoba cattlemen, the Manitoba Veterinarians' Association and Manitoba Agriculture staff.

Branding

Manitoba cattlemen have become increasingly concerned about cattle theft and other cattle losses. Branding reduces the incidence of theft, and increases the chances of missing animals being returned. The return of one animal more than covers the costs of many years of branding and registration fees.

During the year, 182 new brands were registered to bring the total registered cattle and horse brands in Manitoba to 3,310. A biennial Register of Brands book is available.

Agro-Man

An Agro-Man Project demonstrating the use of canola meal in beef feedlot rations was carried out at Elm Creek. Results show the economic advantage of replacing soybean meal with canola meal as a protein source.

An Agro-Man beef heifer improvement project was carried out at Plumas involving 70 heifers. They were received at the project in early November with an average weight of 540 lbs. (245 kg) and returned to their owners the following September 20 averaging 969 lbs. (440 kg) and 84% safely in calf.

Successful Agro-Man beef projects in the Interlake region involving 199 steers includes; a livestock production efficiency demonstration, a demonstration of raising weaned calves to market weight in a custom feedlot and another demonstrating finishing short term cattle to market weight in a custom feedlot.

Hogs

The hog industry plays an important role in Manitoba's agricultural economy. For the year, farm cash receipts from hog sales increased 17 per cent to $162 million or 9.7 per cent of total farm cash income. Hog prices were markedly higher for the second consecutive year. The 100 index price F.O.B. Winnipeg averaged a record $80.61 per cwt. or up 19.6 per cent from 1981. Hog marketings totalled 1,206,386 head, a 2.2 per cent growth from the previous year. A total of 3,208 production units shipped hogs to the Manitoba Hog Producers' Marketing Board.

Management programs were aimed at strengthening the managerial capacity and economic returns of Manitoba swine producers. Emphasis was placed on improving

genetic performance, sow productivity, feed efficiency and carcass quality, and also providing farmers with current technical information.

Nutrition

The Provincial Feed Testing Laboratory analyzed approximately 800 feed samples for swine producers. Three hundred and thirty comprehensive ration and feeding recommendations were forwarded and follow-up farm calls were made upon request.

Breeding

Manitoba Agriculture offers two swine performance testing genetic improvement programs, the Federal-Provincial Record of Performance (ROP) and the Commercial Hog Improvement Program (CHIP) to improve breeding stock quality and total herd efficiency.

Both programs have contributed substantially to improved carcass quality of Manitoba raised hogs. The percentage of hog carcasses indexing 102 or better, rose 1.5 per cent to 67.3 per cent in 1982. This performance was closer to the national average (68.5 per cent) than in any other year.

Federal-Provincial Record of Performance (ROP)

Home testing evaluated a total of 4,237 animals (Table 5). After a six-month closure for renovations, an open house in December marked the re-opening of the Brandon ROP Swine Test Station. The $170,000 renovations consisted of new ventilation, lighting and manure handling systems and a refinished interior. The improved building environment will permit tested animals to better express their genetic potential.

ROP technician workshops and Provincial Advisory Committee meetings were held throughout the year.

TABLE 5
Swine ROP (Record of Performance) Summary 1980-1982.

Year	No. of Animals	Adjusted Age to 90 kg. (Days)	Adjusted Backfat to 90 kg. (mm)	Average Daily Gain (kg.)	Feed Conversion (kg.feed / kg. gain)
MALES STATION TEST (ROP Boar Test Station, Brandon)					
1980	321	149.2	14.8	0.87	2.48
1981	309	151.6	13.8	0.87	2.53
1982	166	151.4	13.9	0.86	2.43
MALES HOME TEST					
1980	1735	172.9	15.7		
1981	1496	169.2	13.5		
1982	1697	170.0	12.9		
FEMALES HOME TEST					
1980	2826	182.6	17.0		
1981	2812	181.5	15.2		
1982	2540	175.7	14.9		

Commercial Hog Improvement Program (CHIP)

CHIP offers both performance testing of replacement animals, as well as a sow management-record keeping program for commercial producers.

Participants were provided an ultrasonic backfat probe service and various record keeping materials and forms, including ear notchers, farrowing calculators, individual sow charts, sow herd record booklets and factsheets on record keeping. Besides assisting new producers in establishing a record keep-

ing system and interpreting performance information, staff advised on other management practices and new developments in the swine industry.

During the year, 1996 gilts in 40 herds were tested (Table 6). CHIP herds continued their dominant role in provincial market hog quality by marketing over ten per cent more hogs in the 102 index or higher category than the provincial average and similar to their advantage achieved in the previous years (Table 7).

Swine Artificial Insemination

Training schools were conducted in conjunction with personnel from A.I. centres. The courses offered training and education in reproductive physiology, heat detection, proper time of insemination, insemination technique, semen handling and sire selection. Staff also assisted producers with semen delivery and on-farm inseminations.

Extension Activities

The Department again provided major support to Hog Days, sponsored a province wide swine seminar and continued the factsheet distribution service. Other activities included commodity group workshops, on-farm consultations, evaluation trial of ultrasonic pregnancy detection devices and provision of technical information through factsheets, bulletins, news releases, training aids and other related publications. Heavy demand continued for last year's Pork Production Home Study publications.

Liaison was maintained and discussions held with agri-business, producer groups and research institutions. Of special interest was the series of three meetings held with Agriculture Canada Research Station, Brandon, to evaluate their research proposals in swine nutrition, genetics, reproductive physiology and meats' physiology.

Staff assisted the Manitoba Swine Breeders' Association in holding the Canadian Swine Breeders annual meeting in Brandon. Province hosted the annual banquet.

Manitoba Hog Day

Held at the Winnipeg Convention Centre, Hog Day was again a huge success in 1982. Some one thousand people attended. Features included a large exhibition of supplies and services available to the swine industry, an exhibitor's directory and producer seminars.

Manitoba Swine Seminar

Producers attending this event in Brandon marked the Chinese New Year (Year of the Pig) by acquainting themselves with the Chinese hog and its potential for crossing with Canadian stock. Improving building ventilation and herd reproductive efficiency were also highlighted. Audience contained many new and young faces and the atmosphere was filled with a noticeably expansionary mood, reflecting low grain prices and strong hog prices at the time.

Swine Factsheet Service

Subscribers to the service receive factsheets and other publications containing the latest information on swine production and management techniques. Publications issued during the year included seven new or revised factsheets on ROP, nutrition, herd health and record keeping, two annual reports and three swine budgets. Heavy response by last year's home study participants resulted in a two-fold increase of subscriptions to 800 individuals, which represents a quarter of the province's active swine producers. Complimentary subscriptions were given to all swine 4-H club members and leaders.

Buildings and Materials Handling

Many new swine facility plans were developed for swine producers. Major emphasis was placed on plans for breeding and gestation facilities. Engineering assistance was provided to several building contractors and equipment manufacturers in planning facilities and equipment for swine producers. Field evaluation of temperature control in finishing barns was conducted. In the past year 287 hog plans were distributed throughout Manitoba.

Marketing — Swine Breeding Stock

The Marketing Branch provided a new 20 foot display for the American Pork Congress in St. Louis, Mo. The display headed up "Manitoba Hog Industry" was staffed by a representative of the Manitoba Swine Breeders' Association and a market development officer from the Branch. Over 180 positive contacts were made with interested swine breeders and 1,000 Manitoba Swine Fact Sheets have since been distributed.

TABLE 6
Commercial Hog Improvement Program (CHIP) Summary (1981-82)

	CHIP PARTICIPANTS				HOG MARKETINGS OF CHIP PARTICIPANTS					
REGION	No. Producers		No. Gilts Tested		No. Marketed ≥ 102 Index		Total No. Marketed		Percent ≥ 102 Index	
	1981	1982	1981	1982	1981	1982	1981	1982	1981	1982
EASTERN	8	9	686	389	3260	4575	3957	5672	82	81
INTERLAKE	13	9	520	529	7022	4784	9443	5901	74	81
CENTRAL	9	7	201	416	4958	4574	7194	6129	69	75
SOUTHWEST	8	10	511	581	24672	16001	29696	20591	83	78
NORTHWEST	5	5	151	90	2286	1212	3567	1844	64	66
TOTAL	43	40	2069	1996	42198	31146	53857	40137	78	78
							MANITOBA AVERAGE		65.8	67.3

TABLE 7
Quality of CHIP and Manitoba Hogs (1980-82)

Year	CHIP Average	Manitoba Average	Difference
1980	73.7	59.1	14.6
1981	78.6	65.8	12.8
1982	78.0	67.3	10.7

A Japanese purebred swine buying mission visited Manitoba in June 1982 and purchased 7 top breeding animals. An invitation was extended to Manitoba swine breeders to enter a display at the November 1984 Japanese Swine Olympics.

Market development staff work closely with Manitoba swine breeders and exporters, setting up and accompanying incoming swine buying missions to swine farms, forwarding herd information, tender proposals, explaining shipping procedures, health regulation information and developing contacts with governments in numerous foreign countries such as China, Africa and India.

A second Japanese swine mission visited hog operation sites in the Winnipeg area in March 1983. In other projects marketing staff assisted in the formation of an export committee to develop purebred swine sales, assisted with the sale of 120 purebred Manitoba swine to Singapore and set up an inventory system of Manitoba swine breeding stock available for interested buyers.

Marketing — Pork

The Marketing Branch continued to work closely with Manitoba pork producers and processors to increase exports of pork and pork products to the U.S.A., Europe and Pacific Rim countries.

Two Japanese pork buying missions visited Manitoba in 1982. Samples of frozen Manitoba pork, cut to Japanese specifications were shipped to various supermarket chains in Japan for evaluation.

In April 1982, executives of the Manitoba Hog Producers' Marketing Board and Marketing Branch staff participated in a Pork mission to Japan. Trading opportunities and sales were discussed while calling on trading companies, supermarket chains and ham manufacturing firms. Sales to Japan followed.

A Pork sales mission to the U.S. was organized and conducted by the Branch in conjunction with the Department of Economic Development & Tourism. This mission met with two supermarket buying offices in the U.S. and included representatives from each pork processing plant in Manitoba, the Manitoba Hog Producers' Marketing Board and the Canada Safeway Export Development office in Edmonton. Orders were placed as a result of this mission.

A Philippine Trading Company sent 2 representatives to Manitoba to visit pork processing plants. Prospects for Manitoba to supply canola and sunflower oils to the Philippines were also discussed.

Poultry

Department poultry activities and regulations have as their objectives:

- Providing services directed at improving production and economic returns to individuals or groups within the poultry industry by offering management techniques and assistance in developing of improved marketing systems.
- Maintenance of quality standards for the marketing of eggs and poultry as prescribed under the Livestock and Livestock Products Act.
- Control of pullorum, typhoid and other diseases in poultry flocks through the hatchery and hatchery supply flock regulations.
- Improving the availability and acceptance of production technology for hatcheries and hatchery supply flocks.

Nutrition

Recommendations on 337 feed samples were prepared and sent out. In addition, nutritional information involving ration recommendations was supplied in response to producer requests.

Breeding

Broiler breeder operators were assisted by the distribution of a Record of Performance book. Assistance was provided on the use of the book. Records from 26 flocks were processed, summarized and presented to participating producers. News bulletins were issued covering areas of concern to breeders such as light control, management, vaccination, chlorination and feeding.

Manitoba Agriculture conducted a hatchery monitoring project which involved a thorough examination of hatcheries and eggs in hatcheries. The effectiveness of sanitary procedures of both the hatchery and hatchery supply flock are assessed so that diseases may be detected and treated. Microbial plates were taken on site and interpretation of results rendered.

Provision was made so that hatcheries could, if they so desired, carry out a self-monitoring program using the microbial plates. Two hatcheries made use of this offer and used 250 plates at the hatchery level. Hatchery

monitoring for breeder flock evaluation, whereby hatches or portions are examined in detail, was expanded during this year.

There was increased demand for advisory work with hatcheries this year. Advice on management, operation and sanitation was provided in detail to at least three hatcheries. On one of these a major report was prepared involving the presentation of fifteen recommendations for change. The department continued to offer owners of turkey breeding flocks the oportunity to have their turkey toms graded through the collection and examination of turkey semen. This process allows the selection of toms with the greatest fertilizing capacity and the culling of those of poor breeding quality. Management suggestions accompany participation in this activity. Four flocks were graded totalling 1,648 toms.

Poultry Health (Regulatory)

Application of the regulations under the Livestock and Livestock Products Act involved pullorum-typhoid testing of all hatchery supply flocks and the inspection of premises. Regulations require that all hatcheries with a 1,000 egg setting capacity or greater must be licensed by the department.

In addition to the pullorum test, turkeys are tested on the basis of a 10 per cent whole blood sample for P.P.L.O. and Salmonella typhimurium. Samples of blood are taken from all chicken breeder flocks and these are tested for Mycoplasma galisepticum, Mycoplasma synoviae and Infectious Bursal Disease. All turkey breeder flocks are tested periodically to maintain a Mycoplasma meleagridis free status.

TABLE 8
Hatchery Supply Flock Statistics — Manitoba

April 1, 1982 — March 31, 1983

Flock Type	Number of Flocks	Female Birds
Broiler		
(1) Regular Shippers	44	102,875
Layers	15	49,600
Dual Purpose	23	13,786
Turkey	12	31,500
	94	197,761

Building and Materials Handling

Staff supplied information on ventilation requirements, light control and building design including efficient feeding, handling and housing facilities. Systems for weighing birds were demonstrated and feed intake control systems scrutinized. Assistance was also provided to hatcheries in correcting ventilation problems. A simple air to air heat exchanger for use in poultry facilities was developed and evaluated. In the past year 26 poultry plans were distributed throughout Manitoba.

Marketing

Liaison was maintained with all poultry marketing boards as well as with commercial companies such as egg grading stations and processing plants.

In international trade a turkey mission to Japan was organized by marketing staff to investigage opportunities for Manitoba deboned turkey meat. As a follow-up, frozen samples were shipped to three potential customers. A trial order of two tonnes of deboned turkey meat from Manitoba was ordered by the Japanese.

A three stage program for further market expansion of this product has been initiated involving Industry, Trade & Commerce's P.E.M.D. Food Program, the Manitoba Turkey Producers' Marketing Board and the Marketing Branch. The first stage is for recipes to be developed for Japanese consumers' taste and diet, using Manitoba deboned turkey meat. A well-known cooking school in Osaka, Japan, will develop the recipe phase of the project followed by consumer cooking demonstrations in Japan.

A test flock to supply turkey broilers of uniform size and weight for Japanese customers was raised in Manitoba which resulted in one container of frozen broilers plus deboned tur-

key meat being shipped to Japan in October 1982. Marketing staff is working with the hatchery, processor and the Manitoba Turkey Producers' Marketing Board to develop a reliable supply of turkey broilers for this market.

A container of deboned turkey meat, beef products (for the first time), samples of geese and hubbard roaster chickens was sold to Japan.

A goose processing plant in Manitoba expanded operations to accommodate the growing interest in Manitoba geese. A container of frozen goose feet was shipped to Hong Kong. Samples of frozen goose breast meat and whole frozen geese were sent to a gourmet restaurant supplier in San Francisco. Regular shipments are now being made to this supplier. Frozen goose samples were also sent to Germany for evaluation.

Disease and Insect Control

Mycoplasma gallisepticum and Mycoplasma synoviae continued to be of concern and a testing program to evaluate their status in broiler breeder flocks was conducted. Infectious Bursal Disease and its effects is another important problem which breeder flock owners are being encouraged to vaccinate against. Mycoplasma meleagridis free status is the aim of turkey breeders. The second year of a program of testing was carried out.

Collection of data concerning Salmonella in breeder flocks continued and involved collecting litter samples for analysis. Results were forwarded to Agriculture Canada staff as part of a larger Salmonella surveillance program. A revised fact sheet on vaccination was prepared and distributed.

Licensing

The department continued to administer regulations respecting poultry and poultry products under the Livestock and Livestock Products Act. These regulations required the licensing of poultry dealers. In this regard, 29 licenses and 19 branch licenses were processed. In addition 20 hatcheries were also licensed.

Bees & Honey

Following a relatively mild winter, spring conditions were only fair for the build up of package and wintered colonies. The late spring and early summer conditions were generally good to excellent for nectar productions. The honey flow was however cut short in many areas by frost that occurred in mid to late August.

Package bee prices increased only slightly in 1982 and ranged in price from about $24.50 to $28.75 for a two pound package of bees and a queen delivered in Manitoba. Package bee prices are not expected to increase greatly in 1983. Due to weak retail sales and continued strong competition in the international market from Argentine, Mexico and China

TABLE 9
Honey Prices and Production — Manitoba 1981 & 1982

	1981	1982
Number of Beekeepers	1,550	1,600
Number of Colonies	103,000	108,000
Honey		
Average — pounds/hive	162	159
Average — kg/hive	73	72
Total Production — lbs	16,686,000	17,172,000
Total Production — kg	7,569,000	7,789,000
Price/lb — ¢	61	61
Price/kg — ¢	134	134
Total Value	$10,178,000	$10,475,000
Beeswax		
Production — lbs	250,290	258,000
Production — kg	113,631	116,835
Price/lb — ¢	228	189
Price/kg — ¢	502	416
Total Value	$570,661	$488,000
Total Value of Honey and Beeswax	$10,748,000	$10,963,000

(mainland), the honey market remained soft following the 1982 harvest. By year end, many beekeepers still had substantial amounts of unsold honey. As a result of the difficult market conditions the price for bulk honey did not change much from 1981. As has been the case in the past, approximately 43 per cent of the Manitoba crop was delivered to the Manitoba Co-operative Honey Producers Ltd., about 50 per cent went on the "open market" and approximately seven per cent moved directly to the consumer.

Package and Wintering Survey (1982)

Once again a survey was conducted of all commercial beekeepers, the Manitoba Co-operative Honey Producers Ltd. and Cloverfield Bee Supplies Ltd., to determine the number of colonies established from inspected package bees and wintered colonies in Manitoba in 1982.

From the survey, approximately 90,000 two pound packages or their equivalent were imported, with about 70% of these originating from California. Colonies established from wintered colonies numbered 51,000. With approximately 1,000 colonies being exported or kept outside the Province, this results in 121,000 colonies established by 1,600 beekeepers. Taking into consideration a 10% loss in colony numbers due to problems in colony management, it is estimated that 108,000 "producing" colonies were operated in Manitoba in 1982. Of this total 33,000 colonies were estimated to have been wintered for the 1982-83 winter.

Apiary Inspection

During the summer of 1982, nine per diem inspectors and two summer students were hired to assist in the honey bee disease inspection and control program. A total of 17,648 colonies were inspected and 509 or 2.88% were found to have American Foulbrood Disease. This compares to 1981 statistics of 18,053 colonies inspected with 345 or 1.91% found to be infected with American Foulbrood.

Ethylene Oxide Fumigation

The honey bee equipment fumigation chamber was again operated in two depot locations at Winnipeg and Rapid City. A new Winnipeg depot for the fumigation chamber was secured in March, 1983. The number of brood chambers fumigated in 1982 was approximately 2,200, down from 2,500 fumigated in 1981.

Samples of extracted honey from the 1982 honey crop were obtained from selected beekeepers who had beekeeping equipment fumigated in 1981. These samples were sent to Alberta and Quebec for ethylene oxide residue analysis. Results obtained indicated residues were below actionable levels.

Leafcutter Bees

In 1982, 100 beekeepers managed 50 million leafcutter bees, valued at $380,000, to pollinate 1,400 ha (3,458 acres) of alfalfa. A major concern of the alfalfa leafcutter bee industry in Manitoba has been the recent detection of chalkbrood disease in leafcutter bee cocoons. Staff worked with the Manitoba Leafcutter Bee Association and Agriculture Canada in carrying out a survey to determine the extent of chalkbrood disease in Manitoba.

Research

Apairists conducted research on indoor wintering at the University of Manitoba. Colonies were monitored throughout the winter with regard to food consumption.

Close liaison was maintained with the Department of Entomology at the University, with cooperation extending through many areas including annual night school courses (Beekeeping For Beginners) and attendance at regional beekeeping meetings.

Extension Activities

Emphasis continued to be placed on four general extension activities; newsletters, meetings, personal visits and support of regional beekeepers associations. Four general newsletters and eight commercial beekeeper newsletters are sent out annually. Numerous regional meetings were attended. Agriculture staff participated in various courses at the University of Manitoba and information was freely distributed both through telephone conversations and personal letters. During the spring, 1982, a series of five honey bee disease workshops were held at Steinbach, Portage la Prairie, Brandon, Dauphin and Winnipeg.

Staff worked closely with the Manitoba Beekeepers Association in an advisory capacity and in direct assistance regarding concerns such as honey promotion, organization of the annual meeting and in prevention of pesticide damage to honey bee colonies. They were also actively involved in the organization of the 1982 annual meeting of the Canadian Honey Council, which met in Winnipeg in November, 1982. Staff involvement with the Manitoba Honey Marketing Board included

assisting the Board in revising board regulations and administrative by-laws, which were subsequently passed by producers in February, 1983. Assistance was also provided to this Board during the administration of the federal government Advance Payment for Crops Program.

The agriculture staff also continued to work in close cooperation with, and acted in an advisory capacity to, the Manitoba Cooperative Honey Producers Ltd. and their members.

Other extension activities included assisting with the Manitoba National Honey Show and helping coordinate promotional displays at a number of fairs, exhibitions and other events.

Bear Damage

A Bear Damage Compensation Program for beekeepers was again offered by the Department of Natural Resources. Manitoba Agriculture continued a Bear Fence Grant Program which allowed for a $100 grant to beekeepers for each electric fence built, up to a maximum of ten fences per beekeeper per year. During 1982 grants were paid for a total of 24 fences.

Beekeepers Compensation Committee

During 1982 a joint committee of the Departments of Agriculture and Health was appointed to develop and administer a compensation program for beekeepers who experienced losses as a result of the 1981 Emergency Mosquito Control Program using the insecticide Baygon. The budget for this compensation program was $125,000.

Buildings and Materials Handling

Handout information was prepared on the design requirements for bee wintering facilities. Several ventilation system designs were prepared for apiarists constructing wintering buildings.

Marketing

The Marketing Branch assisted Manitoba honey producers through the development of a consumer brochure on Manitoba honey. Two containers of honey went to Europe resulting from Branch development work. In addition, the first ever shipment of honey under Manitoba Agriculture's "Cold Country Label" went to Japan.

Sheep

Interest in sheep production remained strong, although low livestock returns discouraged some new producers and affected planned flock expansions. Producer interests were represented by an active Manitoba Sheep Association and the six affiliated Regional Sheep Associations. The third All Canada Sheep Classic was hosted at Brandon and Manitoba producers continued to be active in lamb production and market organization.

Nutrition

Numerous feed samples from producers were analyzed at the Provincial Feed Testing Laboratory, and feeding recommendations were made. Recommendations were followed by farm visits.

Breeding

Federal-Provincial ROP Home Test Program — In 1982-83, 2,755 lambs from 13 flocks were tested on the home test program, about 12 per cent of the lambs born. ROP data flow is coordinated by Manitoba Agriculture staff and extension work is carried out with the results at the producer level. Manitoba Ram Test Station — The station located at Brandon is operated by the Manitoba Sheep Association, with facilities and labour supplied by Agriculture Canada. It is a central testing facility for identifying genetically superior ram lambs. Animals are tested for post-weaning performance under uniform management practices and environmental conditions. Manitoba Agriculture support includes veterinary assistance, management and environment advice.

Extension

A Lamb Marketing Workshop was held at Brandon to examine marketing constraints and possibilities within the industry. A Handling Workshop was held at Fraserwood. A Predator Taste Aversion Project was implemented at Dauphin, and will be expanded province-wide during 1983. The newsletter "Sheep Sense" was published monthly and producers were visited by extension staff and area veterinarians. In the past year 46 sheep plans were distributed on handling, feeding and housing facilities.

Marketing

Slaughter numbers at Federally and Provincially inspected plants increased by 17 per cent (7,731 lambs in 1981 to 9,130 lambs in 1982) while the number of sheep marketed

through the public stockyards decreased slightly.

Considerable effort was extended in assisting the Manitoba Sheep Association in marketing plans and the promotion of sheep products. Producers were coordinated to market in patterns which would make their product available to Manitoba consumers. Lamb promotion was included in the 1982 Manitoba Food Products Event and departmental assistance was given in shopping mall promotion events.

A Lamb Marketing Study was initiated in cooperation with the Manitoba Sheep Association.

Agro-Man

Two Agro-Man projects demonstrating increased grazing productivity for sheep on various cultivated forage species were continued. These projects are at The Pas, in cooperation with the Pasdquia Sheep Producers' Association and at Thornhill, in cooperation with the South Central Sheep Producers' Association. An anti-predator electric fencing Agro-Man project was continued in the Interlake Region in cooperation with the Interlake Sheep Association. This demonstrated increased grazing potential in predator problem areas.

Marketing — Horse and Buffalo Meat

In response to a request for assistance in locating export markets for fresh and frozen buffalo meat, marketing staff contacted European and Pacific Rim countries. A visiting group from Japan showed continuing interest in buffalo meat, but while here made a purchase of horse meat after touring two Manitoba horse meat processing facilities.

Veterinary Services

The Veterinary Services Branch develops and administers the programs and activities which are proven necessary to assure rural and urban Manitobans ready access to competent veterinary services. Adequate veterinary care for the livestock industry is considered an important factor in the overall Manitoba economy. All activities are directed to make rural veterinary practice attractive and adequately rewarding and to assure that veterinarians are involved wherever their expertise will benefit the livestock industry.

Major programs in this area include support to Manitoba's Veterinary Service Districts, provision of a comprehensive diagnostic laboratory service, the encouragement of disease prevention, the provision of top quality semen for livestock artificial insemination, plus a number of other support services outlined below.

Western College of Veterinary Medicine

The Western College of Veterinary Medicine was founded in 1965 in Saskatoon as a four western province venture, to satisfy the long-standing western needs for veterinary training. Manitoba, Saskatchewan, Alberta and British Columbia share net "after federal" operating costs on an annual resident student basis. These payments now exceed $10,000 per student per year. Manitoba's quota is currently 12 students out of a total enrollment of 70. Continued active recruiting measures are necessary to fill Manitoba's rural service needs.

Veterinary Science Scholarship Fund

This activity was introduced in 1946 to provide Manitoba students with some financial assistance for veterinary science studies. Scholarships of up to $750 per year have remained unchanged since 1971. Along with the general support for such studies, this program is designed to encourage Manitoba students to return to serve in their home province upon graduation.

Veterinary Student Summer Employment

Manitoba veterinary students must go out of province for the last four of their six year university course. This tends to separate them from their home province ties, resulting in them often going into practice in other provinces. The veterinary student summer employment activity attempts to maintain their home preferences, intersperses each of their four academic years with four months of practical training appropriate for their academic level and favourably impresses them with the satisfactions to be gained from rural Manitoba service.

Summer employment has proven the most effective method of preparing students for rural practice and of recruiting those well suited to a career in Manitoba.

Veterinary Districts

In 1970, amendments to the Veterinary Services Act provided grants for the establishment of public animal hospitals throughout rural Manitoba. Since that time over 30 such units have been established to greatly improve service to the province's livestock industry, through well equipped and well manned facilities capable of handling all but extraordinary cases.

Further amendments to the Act in 1982 raised the basic matching provincial grant from $7,500 to $10,000 per district.

Veterinary Drug Distribution Centre

The Manitoba Centre was established in 1974 and continues to give Manitoba veterinarians access to volume buying power. In addition, it provides them with a stability of income and professional contact through competitive merchandising, while utilizing their expertise to correct growing and oftentimes serious misuse of veterinary drugs.

The price reduction in veterinary drugs sold to Manitoba farmers through veterinary outlets has exceeded one million dollars in each of the last three years. A similar amount has accrued as profit to the veterinarians, greatly reducing their need for public subsidization and higher professional fees. All direct operating costs of the Veterinary Drug Distribution Centre are recovered.

Humane Treatment of Animals

Over 90% of rural veterinarians have volunteered to act as humane inspectors under the Animal Diseases Act. A highly cooperative working arrangement with the RCMP has been established in handling about 30 cases per year. Of these cases about half prove unfounded, many respond well to veterinary direction and only a few result in court action.

Manitoba Semen Distribution Centre

Artificial insemination has proven to be one of the most effective means ever developed to improve livestock. But, Manitoba does not have a large enough cattle population to sustain a modern full scale producing stud and is caused by economic limitations to rely on imported semen.

The Manitoba Semen Distribution Centre attempts to gain the best of both worlds by making available high quality semen from genetically proven bulls wherever located, without the cost of owning and keeping them.

Semen is purchased from other provinces, U.S.A. and overseas in sufficient volume to meet Manitoba's demand and to assure Manitoba livestockmen of their choice at a reasonable price. Sufficient discount is attained on the volumes purchased to fully recover the operating costs of the Centre.

Provincial Veterinary Laboratory Services

The Veterinary Medical Laboratory is a major reference centre specializing in the diagnosis of all diseases which may affect the varied species of animals in Manitoba. It is designed to supplement and strengthen the service of veterinary practitioners and to provide the expertise that is not possible within the private means of the livestock industry. The laboratory also monitors all serious animal diseases, and in particular, animal diseases which are readily transmissible to humans, and provides the warning and the means to effect control measures where indicated. It serves veterinarians, livestock producers, agriculturists, and other departments of government.

In 1982, the laboratory handled 9,936 requests for service, an increase of 14% over 1981. Distribution of types of samples remained relatively similar to other years, and included carcasses, blood samples, tissues (fresh and fixed), swabs, milk samples, urine samples, semen samples, etc.

A total of 104,946 technical test operations were carried out in 1982, an increase of 17% over 1981.

Out of the total laboratory accessions, poultry cases came to a total of 1,223. The laboratory continues to support the testing of turkey breeders for certification of disease-free status, so they may export to Minnesota.

A severe outbreak of Transmissible Gastroenteritis in piglets occurred at the Brandon R.O.P. station in March 1983. It was confined to the station and the farm of one Purebred breeder. The diagnosis was made at the veterinary laboratory by fluorescent antibody tests and by serology carried out in the virology section

Other specialized concerns during the year centered on increasing losses in hog operations from streptococcal meningitis and pneumonia, increasing losses of week-old piglets from coccidiosis and increasing numbers of virus enteritis cases in calves. There has also been a sizeable increase in numbers of cases being received from mink ranchers, representing several conditions adversely affecting their stock.

TABLE 10
1982 Summary of Technical Operations

Total Accessions Received	— 9,936
Accessions Supervised (includes 1223 avian)	— 7,186
Accessions Unsupervised	— 2,750

INDIVIDUAL TEST PROCEDURES — DETAILED

		1982	1981	% Change
Biochemistry	(BCH)	19,872	17,346	(+ 14)
Hematology	(HMT)	5,803	4,959	(+ 17)
Histology	(HST)	14,070	10,750	(+ 31)
Bacteriology	(BCT)	27,100	26,433	(+ 3)
Mycology	(MCO)	1,084	958	(+ 13)

		1982	1981	% Change
Radiography	(PRC 18, 20)	540	369	(+ 46)
Trim Tissues	(PRP 12)	10,285	8,776	(+ 17)
Retrim Tissues	(PRP 16)	107	190	(- 44)
Decalcifying	(PRP 18, 20)	207	92	(+125)
Parasitology	(PST)	946	960	(- 1.5)
Serology	(SRL)	13,975	9,302	(+ 50)
Virology	(VRL)	10,882	11,615	(- 6)
Toxicology	(TXL)	75	125	(- 40)
		104,946	91,964	(+ 14)

Crops Management and Marketing

Very little snow during the winter contributed to an early spring so many farmers were able to work their fields by the end of April. Some seeding took place before May 1, but seeding became general by mid May.

Cool temperatures in June delayed development of crops in general so when an unseasonable frost occurred on August 26 and 27, many crops, especially the special crops, were at a vulnerable stage and were severely damaged. Buckwheat suffered most with almost a complete loss while sunflowers appeared to suffer very little damage. Loss of grade of wheat, barley and canola was common. Some fields of oats were cut for greenfeed. Flax fields fared better than expected and some high yields of good quality were experienced.

Cereals

Wheat

The area planted to spring wheat in Manitoba was estimated at 1 538 000 ha (3.8 million acres). This represented an increase of 61 000 ha (200,000 acres) over 1981. With an average yield of 2 300 kg/ha (34.3 bu/acre) production was estimated at 3 546 000 tonnes (130.3 million bu) which was an increase of 116 000 tonnes (15 million bu) over last year.

The most popular variety continued to be Neepawa with the new variety Benito making dramatic gains in popularity, being seeded on 21.2% of the area. Glenlea and Sinton remained at 14% while Selkirk dropped to 7%, mainly because of the substitution of Benito. Columbus was under large scale seed production in 1982 and certified seed will be available for 1983 planting.

Durum wheat was planted on 81 000 ha (200,000 acres) in 1982 — a drop of 20 000 ha (50,000 acres) from the year pervious. Production estimated at 182 000 tonnes (6.7 million bu) was also down by 14 000 tonnes (500,000 bu).

Two varieties — Coulter and Wakooma accounted for practically all of the durum varieties planted at 54% and 43% respectively.

Oats

Oats was planted on 243 000 ha (600,000 acres) in Manitoba — identical to the 1981 planting. Production, estimated at 571 000 tonnes (37 million bu) was an increase of 108 000 tonnes (7 million bu) due to a slight increase in average yield.

The most popular variety was Harmon being planted on 36% of the area. Fidler gained in popularity, being a new variety, from a very limited seeded area to 36% of the planted area. Hudson was planted on 25% of the area.

Barley

Barley was planted on 809 000 (2 million acres), a very slight drop from the previous year. Production, estimated at 2 373 000 tonnes (109 million bushels) was a slight increase of 40 000 tonnes (2 million bushels) over 1981. The most popular variety was Bonanza, a malting variety which was seeded on 38% of Manitoba's barley area. Bedford was planted on 16% of the area followed by Conquest on 15%. Varieties such as Johnston and Argyle, being new varieties, were in seed production in 1982.

Rye

Rye was planted on 80 000 ha (200,000 acres) in Manitoba, the majority being fall rye. This was only a slight increase over 1981 planting. Production was estimated at 183 000 tonnes (14.3 million bushels) an increase of 8 000 tonnes over last year.

The most popular varieties were Cougar and Puma, seeded on 48% and 44% of the area respectively. The new variety Musketeer was planted for seed production in 1982 and certified seed should be available for 1983.

Oilseeds

Flax

The area seeded to flax in 1982 in Manitoba was estimated at 364 000 ha (500,000 acres). This is an increase of 81 000 (150,000 acres).

The 1982 production of 437 000 tonnes (9.2 million bushels) is an increase of 175 000 tonnes (3.3 million bushels).

The most popular variety was Dufferin occupying 51% of the area followed by Linott at 30.4% and Culbert at 16.3%. The new variety McGregor was in seed production and certified seed should be available to the public for planting in 1983.

Canola (Rapeseed)

The 1982 canola plantings were estimated at 344 000 ha (850,000 acres). This represents an increase of 42% over the 1981 planted area. Varieties of the Argentine type were used in an estimated 77% of the planting with Regent leading in popularity. An estimated 90% of the crop were seeded with canola varieties.

Due to the August frost, the quality of the harvested crop was lower than in 1981.

Sunflowers

Sunflower plantings were estimated at 71 000 ha (175,000 acres) — a sharp reduction of 35% from 1981. Manitoba's production accounted for 92% of total Canadian sunflower production.

An estimated 94% of Manitoba's oilseed sunflower plantings were with varieties of the hybrid type.

Special Crops

Planting to corn for grain production was estimated at 93 100 ha (230,000 acres) in Manitoba which was a small increase over the 1981 planting. The August frost severely damaged an estimated 12 150 ha (30,000 acres) resulting in most of that area being harvested as silage. Some corn that was late and severely damaged was plowed down.

Other crops such as buckwheat, field peas, mustard, lentils, canaryseed, sugar beets, field beans, fababeans and soybeans were grown in a substantial area in Manitoba — mostly under contract. The August frost reduced the quality of many of the crops, particularly susceptible ones like buckwheat. These crops allow Manitoba farmers to expand their rotation and provides an increased cash flow.

Materials Handling

The large amount of late, immature corn left growers looking for ways to salvage their crop. Alterations were made to a combine to allow it to be used for grinding the whole

corn cob. This material was then ensiled and used for cattle. Some problems in the handling of this product remain to be solved.

Lab tests were conducted on 55 grain aeration and natural air drying fans to determine their performance characteristics. The results together with past years' tests were published and widely distributed throughout Manitoba. A total of 50 field tests were conducted on various crops to determine their airflow resistance. This information was used to revise "Movement of Natural Air Through Grain" which was also widely distributed. A compuer program was also developed out of this information to design natural air drying systems and provide management information. About 10 farm meetings were held throughout Manitoba to explain the principles of natural air drying and to assist farmers in the selection and operation of grain drying systems. Hundreds of individual inquiries from farmers and dealers were serviced. A "Grain Days" exhibition of grain drying, storage and handling equipment was held at Portage la Prairie.

Assistance was provided to numerous farmers in planning grain storage and handling facilities. An aeration system for hopper bottom bins was designed and evaluated, and the plans made available to farmers and manufacturers.

Computer Programs

A detailed costing program to compare the costs of custom combining vs owning a combime was developed. The program included default data for the user who doesn't have good estimates of depreciation, repair, and fuel costs, and it also allows the user to enter any data of his own.

A program to determine the fan requirements for any bin, crop and moisture condition was developed for farmers who wish to aerate or natural air dry cereal grains or oilseeds. The program will also select suitable fans from a computer file to meet the specified requirements. A second part of the program predicts the airflow rate that will be produced by a given fan in any bin-crop combination. This is used to establish safe maximum moisture levels and/or grain depths for a natural air drying system.

Seed Cleaning

During 1982-83 there were three major seed processing facility designs undertaken. In addition to these projects there were several consultations with producers, commercial processors and testing agencies throughout the year regarding seed cleaning facilities and equipment.

Marketing

Marketing staff were involved in arranging and conducting a number of tours in the province. Foreign groups involved included; canola representatives from Finland, corn buyers and processors from Cuba, a seed mission from Venezuela and a group of Japanese breeders of forage seed. In addition, a meeting was arranged with representatives of a Japanese trading company interested in buckwheat and Natto type soybeans.

Marketing Branch staff conducted a mission to Cuba along with a Manitoba grain processor and an oil seed processor. Discussions centered arcund corn sales for the feed industry, canola meal feed trials and sales of black beans and yellow pea sales from the 1983 crop. Support was also provided on canola feeding trials in Cuba.

A department marketing officer was part of a mission to Costa Rica, Guyana, St. Vincent, Trinidad and Venezuela where barter negotiations were discussed involving a number of special crops. In addition, the marketing of Manitoba pork to the Caribbean and South American countries was investigated. A follow-up trip to these areas was made later in the year to further discuss barter opportunities. Liaison was also provided between Manitoba companies and Venezuela buyers for bids and prices to facilitate sales and shipments of field peas, field beans, lentils and alfalfa to Venezuela.

Manitoba Wild Rice

This commodity is enjoying success and market development work is continuing. There are four plants in Manitoba which process and bag wild rice for sale in bulk or in packages.

New Crop Investigations and Development

An important phase of special crops work in Manitoba is the evaluation of new crops. Crops such as lupins have potential as a high source of plant protein for which a ready market exists. It is necessary to establish production parameters for these new crops before farmers attempt to grow them.

Winter wheat production in Manitoba is of interest and success has been achieved when this crop is planted in the fall directly into undisturbed stubble.

Determining where varieties of all crops are likely to be most successful is an important phase of variety development. An Agro-Man project aimed at determining which varieties are best suited to various areas of Manitoba is an active project.

TABLE 11
Summary — Major Special Crops — 1982

Crop	Area Hectares	Yield per Hectare	Price	Value of Production (Dollars)	Value per Hectare (Dollars) 1982	1981
Canola	344 000	1.165 t	$257.00 /t	$102,995,300	$299.40	$350.68
Sunflowers	71 000	1 230 kg	20¢ /kg	17,466,000	246.00	325.13
Grain Corn	80 970	3.14 t	$105.00 /t	26,695,800	329.70	502.90
Buckwheat	46 500	465 kg	32¢ /kg	6,919,200	148.80	345.87
Field Peas	44 500	1 836 kg	19.2¢ /kg	15,686,800	352.50	486.25
Mustard	10 100	1 054 kg	25.3¢ /kg	2,693,300	266.65	356.90
Lentils	16 190	1 057 kg	38.5¢ /kg	6,588,400	406.95	440.22
Canaryseed	20 600	1 340 kg	22¢ /kg	6,072,900	294.80	369.60
Sugar Beets	11 230	33.1 t	$37.00 /t	13,753,380	1224.70	1682.15

Crop	Area Acres	Yield per Acre	Price	Value of Production (Dollars)	Value per Acre (Dollars) 1982	1981
Canola	850,000	20.8 bu	$5.83 /bu	$102,995,300	$121.17	$141.83
Sunflowers	175,000	1100 lbs	9¢ /lb	17,466,000	99.80	131.30
Grain Corn	200,000	50 bu	$2.67 /bu	26,695,800	133.48	203.25
Buckwheat	115,000	8.7 bu	$7.00 /bu	6,919,200	60.16	140.08
Field Peas	110,000	27.3 bu	$5.25 /bu	15,686,800	142.60	197.10
Mustard	25,000	893 lbs	11.5¢ /lb	2,693,300	107.73	144.72
Lentils	40,000	1000 lbs	17.5¢ /lb	6,588,400	129.18	178.25
Canaryseed	51,000	1200 lbs	10¢ /lb	6,072,900	119.07	148.50
Sugar Beets	27,750	14.7 t	$33.70 /ton	13,753,380	495.61	681.12

Seed Production

Approximately 106 889 ha (264,016 acres) were devoted to production of pedigreed seed in Manitoba in 1982. This is a reduction of some 10 839 ha (26,772 acres) from last year. There are 1,677 pedigreed seed growers in Manitoba.

TABLE 12
Major Crop Kinds Planted for Seed Production

(Manitoba)

	1981 Hectares	1981 Acres	1982 Hectares	1982 Acres
Wheat	42 833	105,798	36 481	90,108
Oats	3 281	8,104	2 217	5,476
Barley	22 358	55,224	19 147	47,293
Flax	12 809	31,638	14 755	36,445
Rape	2 295	5,669	1 592	3,932
Other	34 152	84,355	33 697	80,762
Total	117 728	290,788	106 889	264,016

Agro-Man

An Agro-Man project which is cost shared between the Manitoba Government and the Government of Canada provides an opportunity for assessing the value of crops such as soybeans which had not been grown to any extent previously. The soybean trials under this program were extensive and were located in most parts of the province showing any promise for profitable production.

Another extensive Agro-Man project involved corn production. Unfortunately many of these tests were affected by the untimely fall frosts.

Crop Insect Infestations

Wireworms — Reports of infestations were much reduced from 1981 when wireworms occurred over a wide area of the province.

Grasshoppers — Good growing conditions resulted in a further reduction in area and severity of infestations compared to 1981. A small area near Minitonas, however, experienced a severe outbreak of hoppers on pasture land due to prolonged drought during the early part of 1982. Heavy rainfall later in the growing season alleviated the problem.

Cutworms — For the third year in a row, cutworms were a serious problem in corn, sunflowers and cereal crops. In some cases, fields required reseeding after suffering heavy cutworm damage.

Stalk Borers in Corn — A species of cutworm *Helotropha reniformis* was recorded for the first time as an economic pest of corn at Portage la Prairie, Neepawa, Carman, Treherne, Brandon and Warren. This insect has been recorded previously but at non-economic levels. Most damage was restricted to field margins bordering grassy headlands and divided strips.

Sunflower Midge — For the second consecutive year, significant sunflower midge infestations occurred in the Red River Valley between St. Jean and the United States border. Although some fields suffered severe damage, overall economic damage was estimated at less than 10%.

Aphids — Aphids occurred on field peas, barley, wheat, flax and canary seed from mid-July through early August. Good growing conditions minimized Crop damage.

Sunflower Moth — This insect which is an economic pest in North Dakota was found in the Waskada area in southwest Manitoba.

Horticulture

The 1982 production season was generally cool with abundant moisture resulting in slow growth. Untimely frosts in early June and again in late August caused significant crop losses in certain areas. Hail damage losses were reported in the Portage la Prairie area. Heavy fall rains in October caused a delay in harvesting of storage vegetables and ornamentals resulting in lower quality product. The harvest of summer vegetables and fruit crops compared favorably with that of 1981 with prices holding steady to slightly lower.

TABLE 13
Total Estimated Value of Horticultural Crop Production 1982

Potatoes	$30,500,000
Commercial Vegetables (fresh)	$ 7,288,000
Fruit	$ 1,667,000
Environmental Controlled Production (Greenhouse and Mushrooms)	$ 6,200,000
Nursery Products and Sod	$10,000,000
Miscellaneous	$ 4,000,000
TOTAL	$59,655,000

Potatoes

The area planted to potatoes decreased by 3.4% to 16 000 ha (39,500 ac). Of this total 14.7% was produced for table stock, 78% for processing and 7.3% for seed. Gross production was estimated at 263 000 t (5,800,000 cwt) and gross yield at 16.4 t/ha (147 cwt/ha). The combination of reduced plantings and yield dropped gross production by 17.2%. In this change table stock increased 29%, seed decreased 7.6% and product for processing decreased 26%.

After early initial plantings heavy rain in June resulted in excessively wet conditions and some crop loss. A severe frost in the third week of August affected a wide area of the Province with top kill varying from minor to complete. Early maturing varieties had reached full yield potential and were not severely affected by the frost.

Quality of table stock going into storage was good. Fry color and keeping quality of chipping stock was also good but many lots of Russet Burbank tubers produced variable to poor fry color. The relatively large percentage of small tubers made grading difficult for french fry raw product shipments to the North Dakota market.

Vegetables

Crop area planted to vegetables in 1982 increased by 6% over that of 1981. Vegetables showing major increase included broccoli, onions, carrots and peppers. There was a substantial drop in area of cabbage, radish and beets. Total production increased by 4535 tonnes (10 million pounds), up 23% from 1981 but gross value increased only 8%.

The 1982 crop production season was generally cool with abundant moisture. Frost in late spring and early fall coupled with hail during the summer caused substantial crop loss particularly in the Portage la Prairie area.

Fruit

Crop area planted to strawberries increased by 10% for a total of 166 hectares. Cool, dry June conditions delayed harvest by a week to 10 days. Spring frost resulted in a 10 to 15% yield reduction. Yields varied from 4500 to 17 000 kg/ha with prices ranging from $3.50 to $6.00/4 L container.

Interest continues to grow in respect to U-Pick raspberries with new plantings being established. A 4 ha site is being initiated on organic soils in eastern Manitoba.

Saskatoon plantings were damaged by early and late frosts resulting in poor yields. U-Pick opportunities with this crop are limited until further production management and propagation techniques are developed.

Apple trees in semi-commercial orchards produced below average yields. New orchards in the Morden and Winkler areas have reached a bearing stage and will have a light crop for 1983.

Greenhouse

Moderate growth was experienced in the greenhouse industry. Sales increased by 25% over 1981, but growers reported lower prices. Imports from U.S.A. have tended to undercut the prices of local product to the chain retailers.

Ornamentals

Plantings of nursery stock increased by 20% for a total area of 485 ha (1200 acres). Retail sales were reported at 10 - 15% above that of 1981 for the larger operators. Smaller nursery operations indicated a decline. Lack of construction starts again affected retail sales. Interest continues in fall harvesting with the construction of two insulated storage buildings.

Little or no expansion occurred in nursery sod production in 1982. Area in production is 1000 ha. Prices remained steady at the 1981 level of 50¢ to 75¢/m^2.

Out-of-province shipments went to central and eastern Saskatchewan with small amounts to northern U.S.A.

Investigation and Development Programs

Investigation and development projects were undertaken to determine new crops technology and economic potential of various horticultural crops. The projects in many cases were carried out in co-operation with the University of Manitoba and Agriculture Canada Research Stations within the Province. Funding for a member of the projects was under Federal/Provincial Agro-Man Agreement.

Special Projects:

- Comparison of banded versus broadcast fertilizer application for Russet Burbank potatoes.
- A wide range of comparison studies on new technology versus current grower practices in the production of commercial potatoes.
- Soil fumigation to control disease in potato production.
- Utilization of trickle irrigation in commercial vegetable production.
- Post harvest mechanical removal of plastic mulch.
- Determination of head lettuce production on peat soils.

- Storage evaluation of new carrot cultivars.
- Fluid seeding (Gel) pregerminated seed of vegetable crops.
- Herbicide trials in cooking onions.
- Cost of production study cooking onions.
- Cultivar evaluation of trials for vegetable crops.
- Seeding depth and rates study — pickling onions.
- Determination witloof (Belgium Endive) production technology.
- Post harvest and in storage treatment for sclerotinia disease control on carrots.
- Determination monitoring system to forecast spray program for early blight on carrots.
- Evaluate seed treatment for control of phoma disease of rutabagas.
- Evaluation of benomyl and ronilan fungicide for control of sclerotinia in lentils.
- Utilization of soil fumigation for commercial strawberry production.
- Production of monarda oil in Manitoba.
- Cultivar evaluation of forage, barley and potatoes for northern Manitoba.
- Evaluation of high density plantings in strawberry production, 2nd year.
- Determination of preventative and control measures for strawberry yellows.
- Utilization of plastic mulch for overwintering strawberries.
- Evaluation of tissue cultured strawberry plants.
- Evaluation 12 new strawberry cultivars.
- Fungicide trial to control cedar rust of saskatoons.
- Cost of production study on bedding plants.
- Determination of accelerated growth techniques for evergreens.
- Evaluation of suitability of current grower storage for overwintering nursery stock.
- Fertility trial on peat soils for sod production.
- Paddy wild rice investigation trial including insect control, fertility requirements, and weed control.

Northern Horticulture

Cool, dry growing conditions provided slow growing conditions and late maturity for all crops. Root crops yielded slightly less than in 1981 while greenhouse crops of tomatoes and cucumber suffered in terms of increased disease problem brought on by cool, cloudy conditions.

The Northern Horticultural Service Program encouraged expansion in gardening through the following programs:

- The Department provided a demonstration of plastic tunnels for 17 communities for the growing of vegetables and bedding plants.
- Demonstration gardens were established in 18 communities in co-operation with Nutritional Advisors from Frontier School Division and Medical Services Branch, Health and Welfare Canada.
- Youth gardening program was made available to 100 children in 12 communities. Assistance was provided to 4H Clubs, Scouts, Cubs, Brownies and Recreation Centres in respect to gardening programs.
- Provisions for equipment to break 28 hectares (70 acres) of land in Wabowden area.
- Provided land tilling services for 144 gardens distributed in 12 communities.
- Land tillers were made available for public use under supervision of the Nutritional Advisors in 16 communities.
- Technical backup was provided in the form of onsite visits to 30 communities. Information service was provided to the public at large and through numerous workshops and seminars. A radio program "Wintergreen" is aired bi-weekly over C.B.C. North Country and articles are published regularly on timely topics.
- Technical services were provided to 11 semi-commercial farming operations, eight involving vegetable and potato production and 3 centering around poultry, dairy goat, cattle, forage seed and barley production.

Extension Activities

Technology transfer concerning horticultural crop production and marketing was undertaken through a number of activities;

Production guides for vegetables and strawberries were revised and distributed to growers as well as revised disease recommendations of all crops. Technical material on irrigation for the major horticultural crops were prepared for inclusion in the Irrigation Manual for Manitoba. A series of 5 field days with a total attendance of 400, were held for growers to view the latest innovations in production technology.

Newsletters and releases were published on a timely basis, numerous individual presenta-

tions were made to various organizations and all specialists prepared and presented lectures in the M.I.A. Professional Update Course on Horticulture. In addition a two day seminar on Disease Identification and Control was held for regional field staff.

Staff had considerable involvement in Horticultural Industry Days, a three day educational conference and trade fair with a registration of 550. It was carried out in cooperation with five grower associations, industry representatives and research institutes. This annual conference continues to provide a central function where growers can be updated on current technology advances in the respective crop areas.

Plant Pathology Laboratory

A diagnostic service program for disease problems in all crops was provided through the Plant Pathology Laboratory, Agriculture Services Complex.

A total of 7,914 samples were processed through the laboratory. Samples received from the general public increased by 18% over 1981. The increase was attributed to increased problems in potato and vegetables as well as special crops.

Field surveys to assess the type and amount of disease infection were carried out on canola and alfalfa. The major disease problem encountered was sclerotinia, causing an overall provincial loss of 10 - 15% in canola. A total of 102 soil samples from sugar beet fields were analysed for cyst nematodes. Nematodes were detected in 17 fields. Of 20 samples of lentil seeds tested 6 were found to have ascocyta, a serious seed borne disease.

Elite Seed Potato Farm (Espo Farm)

Espo Farm was established as a joint project between the Manitoba Department of Agriculture and Manitoba Seed Potato Growers' Association to ensure a source of disease free seed stocks to be used in producing commercial seed. In 1982, 59 tonnes of Elite II and 290 tonnes of Elite III stock were produced, sufficient to meet growers' stated demand with the exception of the Russet Burbank variety. Manitoba Agriculture's financial input is funded through the Agro-Man Agreement. Saskatchewan Agriculture is also a contributor to the program.

Horticultural Answering Service

A telephone answering service is provided during the spring and summer months to assist the public with problems in Horticulture. Calls serviced in 1982 totalled 2,450. A significant number of calls were received from rural areas through the Citizen Enquiry Service. Assistance was also provided to 4 rural community groups providing this service on a voluntary basis.

Specific Tariffs

Co-ordination of the implementation and cancellation of specific duties on fresh vegetable products for the Western Tariff Zone was carried out on behalf of the Canadian Horticultural Council. Action was requested for placement of duties on 22 products.

Regulatory

The Horticultural Section was responsible for the Administration of four Provincial Acts:

Manitoba Fruit and Vegetable Sales Act — Regulates the sales of fresh fruit and vegetables within the Province.

Manitoba Horticultural Societies' Act — Provides for membership and prize list grants to horticultural societies. Grants of $18,770.66 were distributed to 46 societies.

Manitoba Plant Pest and Diseases Act — In the administration of this Act 30 nurseries were inspected and licensed. Tree pruners courses are also held for individuals wishing to qualify for a commercial license under the Act and those desiring to upgrade their skills in tree maintenance and care. In 1982 131 licenses were renewed.

Manitoba Dutch Elm Disease Act — In carrying out the surveillance program for Dutch Elm Disease The Department's Plant Pathology Laboratory is responsible for supplying the diagnostic laboratory services. A total of 5,500 samples were processed in 1982.

Dealer and Applicator Training

Educational courses on disease control required for new dealers and applicators were continued. Training was also provided to those requiring to requalify for licences. A total of 265 dealers and applicators attended the 5 courses held in January, 1983.

Facilities and Equipment

Detailed plans and assistance was provided to potato growers on several storages which were constructed. Most of the storages constructed are very up-to-date, incorporating automatic temperature control and humidification equipment, and some with refrigeration. Detailed plans were also prepared for a

large multi-bin storage to be built from precast concrete. Consultations were held with several contractors and building suppliers to inform them of the special requirements of potato storages.

Service to vegetable growers included structural and ventilation design assistance for new cooking onion storage, automatic ventilation and humidification controls for large onion set storage, installation of experimental ventilation ducts to control condensation on stroage ceilings and provision of information enabling a grower to build and install an atomizing nozzle humidification system in storage facilities. Recommendations on how to control wood decay in vegetable storages was prepared and issued in leaflet form.

The high cost of heating greenhouses continued to be a major concern of many growers. Department staff studied several alternative heating systems, including infra-red systems, wood and straw systems and heat pumps utilizing ground waters as the energy source. As a service to fruit and ornamental growers staff monitored a bare root nursery storage facility and developed design recommendations on this recent innovation.

Marketing

Department marketing staff worked closely with potato growers, processors and distributors, to increase the use of local potatoes, particularly in the frozen state for domestic and export markets. Similar cooperation with the Manitoba Vegetable Producers' Marketing Board assisted the board in finding markets for over supplies of both winter and summer crops. In addition, production opportunities for import replacements were identified.

Considerable effort on the part of the Marketing Branch assisted in the establishment of Manitoba's silverskin onion industry, centered at Portage la Prairie. Major pickle companies are now purchasing large quantities from Manitoba rather than importing.

Assistance was provided to the new Mushroom Association and continued cooperation with the Manitoba Strawberry Growers' Association resulted in support for market research, information distribution, recipes and promotion of locations for U-Pick strawberry farms.

Forage and Pasture Management

The Department's grassland management program is designed to demonstrate the benefits of forage management with maximized use of grass, legumes and annual crops. It is a direct extension method for establishing visible benefits to livestock producers. On-farm demonstrations are conducted as a second stage of this program.

The grassland section's major responsibility is to coordinate and develop regional forage programs that will meet the needs of the livestock producers in Manitoba. In 1982-83, this involved six major grassland demonstration projects spread throughout the province. Five of the projects related to beef and one project served both beef and dairy. About 2,400 producers have been directly involved in these projects since they started in 1974. Producers are closely involved in the management and direction of the projects. Manitoba Agriculture absorbs the operating costs, which are minimal since farmers supply the cattle. All projects are administered by regional staff.

Regional Grassland Projects

In the Southwest region the Marco grassland association continued operation as a cow-calf unit with major emphasis on breeding and the use of R.O.P. records. Fifty cows and calves were grazed on the managed pasture site and this proved to be a good demonstration to producers on the effectiveness of recommended procedures.

In the Northwest region grassland projects included three on beef and one on sheep. These demonstrations directly involved 180 farmers and illustrated increases of pounds of beef per acre, the cost of that production and the merits of assuring year round feed supplies.

The Central region carried out forage management demonstrations through four Agro-Man projects: Pembina, Louise, St. Alphonse-Bruxelles and Alonsa. The objective was to have farmers develop new skills and knowledge in pasture and forage management. Emphasis was placed on increasing productivity of forage while reducing production costs.

The Eastern grassland society and the Stuartburn-Piney agricultural development association, with a membership of 400, sponsored most of the forage demonstrations in the Eastern region. Demonstrations included alfalfa management, pasture improvement by sod seeding, aerial bush spraying, introduction of more productive forage species, rotational grazing and forage preservation. The treed rangeland improvement program continued to have a major impact on forage

and livestock production. The Eastern grassland society also cooperated in the planning and execution of a wide range of demonstrations at the Seven Sisters forage and grassland demonstration site.

The Interlake grassland society completed its sixth and final year of operation on its pasture site in the Ashern area. A controlled breeding program based on heat synchronization was carried out along with the grazing program. Since its inception in 1977, the Ashern project has involved 237 farmers and ranchers. The complementary grazing system can be adapted on many farms and ranches in the Interlake. The system makes use of small acreages of tame seeded pasture grazed in rotation with a larger acreage of native pasture. The newly formed east Interlake grassland society operates the Gunton facility, where a replacement heifer rearing project involved 80 heifers from 20 producers.

Grass Species Investigation Program

Staff were involved in evaluating two new strains of grasses for Manitoba conditions, a tall fescue and an orchardgrass. To date, the orchardgrass appears to be significantly more winter hardy than currently recommended varieties in Manitoba. The tall fescue appears to be very well adapted to late fall grazing and could potentially lengthen the grazing season.

Forage Seed Production

Total production of all forage seeds, including foreign and private varieties, decreased from 9,110,000 kilograms (20,084,000 pounds) in 1981 to 7,580,000 kilograms (16,712,000 pounds) in 1982. The total farm value decreased from $6,681,000 to $5,025,000 in 1982.

There was a decrease in the area seeded down to forage crops in 1982. Most of the decrease came in timothy and was a response to the low prices received by the grower in 1981. There was a large drop in production of alfalfa seed due to a combination of frosts which were experienced during the growing season. The 1982 production of alfalfa amounted to only 25% of the previous year. In total, the 1982 forage seed crop decreased by 17% over the 1981 crop. Sweet clover was an exception where production increased by 71% over 1981.

In general, the price paid to producers advanced slightly in relation to 1981 prices. Alfalfa, birdsfoot trefoil, red clover, and timothy recorded advances in prices while kentucky bluegrass, meadow fescue, and sweet clover recorded slight declines. The firming up of prices was attributable to the decrease in production and a strengthening in consumer demand.

TABLE 14
Average Prices for Certified and Common Seed — 1982

	Production		Price Per		Farm
	pounds (000)	kilograms (000)	pounds $	kilograms $	Value ($000)
Alfalfa	849	385	.80	1.76	679
Birdsfoot Trefoil	298	135	1.75	3.86	522
Bromegrass	220	100	.35	.77	77
Kentucky Bluegrass	298	135	.30	.66	89
Meadow Fescue	441	200	.35	.77	154
Single Cut Red Clover	496	225	.28	.62	139
Sweet Clover	6,614	3,000	.18	.40	1,191
Timothy	7,496	3,400	.29	.64	2,174
	16,712	7,580			$5,025

Canadian Forage Seed Project

This project was established to multiply and distribute Foundation seed of the Canadian public forage varieties. In 1982-83, applications for foundation forage seed were up somewhat from 1981-82, but were not as high as in the late 1970's. The increase in applications was due to improvement in prices that were received for the 1982 crop. In total 131

orders were received from Manitoba farmers. Some 5,233 kilograms (11,537 lbs.) of Foundation seed was distributed, which represented 96% of the amount distributed in 1981-82.

Agro-Man

Project #301

The Grassland And Forage Production And Handling Demonstrations Project was funded under the Federal-Provincial Value Added Crops Production Agreement. The intent of this project was to improve the production, handling, and utilization of grasses and other forages grown for livestock feed by demonstrating modern grassland livestock management technology. It also investigated and demonstrated economical methods for on-farm storing, protecting, processing, and feeding forage. This project is operated by regional staff once sub-projects have been reviewed and approved by the Grassland Section. The Grassland Section also acts as a resource to the regional demonstrations.

The project results to date have been very encouraging. A high proportion of Manitoba's livestock producers have been exposed to the numerous and varied demonstrations that have been run under the project.

Project #303

The Forage Seed Production And Demonstration Project is also funded under the Federal-Provincial Value Added Crops Production Agreement. Approximately ¾ of the money involved is contracted out to the Manitoba Leafcutter Bee Association for work with alfalfa seed production. The Association has been very successful in establishing excellent investigational and demonstrational trials. Over the first four years of this project, the Association has been able to demonstrate to producers that they can maintain production levels on test fields close to 650 kilograms per hectare (600 pounds per acre). Unfortunately, in 1982, due to untimely frost, the yields on the test plots were below this level, but substantially higher than most commercial fields. Part of the provincial increase in alfalfa production is undoubtedly attributable to the influence of these demonstrations being conducted by the Leafcutter Bee Association.

Also, under this project, the Grassland Section established several trials dealing with timothy, birdsfoot trefoil, and Kentucky bluegrass seed production. Unfortunately, due to drought and other establishment problems, the original seedings were lost. However, work is continuing with Kentucky bluegrass and birdsfoot trefoil in particular.

Weed Control

Weed control on cropland was generally adequate in 1982. Farmers again tended to rely more heavily on post emergent herbicides than on soil applied products. Wild mustard was abundant and created problems in special crops, particularly canola and sunflowers where recommended control measures are limited. Increased concern over restrictions on crop rotations caused by residual herbicides was evident in 1982.

Herbicide Use

Farmers used 5.8% more phenoxy herbicides than in the previous year, with a continued reduction in the use of ester formulations. Use of wild oat herbicides was up 3.7%. Amount of TCA and dalapon used decreased 21 and 48% respectively, while the use of "other herbicides" increased 32%.

Analysis of herbicide use data from Manitoba Crop Insurance Corporation questionnaires (1981 crop season) provided the most detailed herbicide use information ever available, for each crop and for each crop zone. Differences between crop zones indicated that farmers are relating herbicide selection to weeds present, crop management preferences and local performance of products.

TABLE 15
1982 Herbicide Use

Herbicide	Amount Used
2, 4-D ester	1,500 kg
2, 4-D LV ester	65,200 kg
2, 4-D amine	454,300 kg
MCPA ester	12,000 kg
MCPA amine	429,600 kg
MCPA Na and K salts	64,500 kg
TCA	129,300 kg
Dalapon	6,100 kg
"Other" herbicides	664,100 kg
Wild oat herbicides	2,103,800 kg

Investigations

Several evaluation trials were conducted to support the annual recommendations. Highlights included:

- Comparison of alternatives to the use of CIPC + Randox on onions indicated potential treatments for further testing, but none of the currently available products were adequate to replace Randox.

- Roundup at reduced rates, in combination with ammonium sulphate fertilizer, gave quackgrass control equivalent to recommended rates, and warranted further testing. New experimental herbicides did not control established quackgrass but one, Dowco 453 gave adequate control in flax where rhizomes were fragmented by tillage prior to planting. Products which did not perform adequately were deleted from the recommendations.
- Proso millet in corn was controlled by an experimental herbicide. Trials will continue in 1983 to support registration of this product.
- Control of Canada thistle in corn with an experimental herbicide was again superior to current recommendations. Trials will continue in 1983 to support registration of this product.
- Forages — multiple crop screening trials were initiated in the fall of 1982 to strengthen forage crop weed control recommendations. Trials were also conducted on specific weed problems in forage crops —red bartsia, bladder campion, American dragonhead and absinthe.
- Current recommendations for control of kochia in cereal crops were supported.
- Recommendations for control of volunteer buckwheat in cereal crops were strengthened by the removal of inconsistent treatments.

Biological Control

Monitoring continued on insects previously released for control of leafy spurge and nodding thistle. Biological control is slow and difficult to establish but has the potential to provide environmentally safe methods of weed control, and a practical means of control in inaccessible areas.

Three new releases were made in 1982, with the co-operation of Agriculture Canada:

- a leaf-gall fly *(Cystiphora sonchi)* was released near Deloraine to control perennial sow thistle.
- to control leafy spurge, an insect, *Aphtona flava*, was released near Cypress River. Releases were made at a caged site and in the open.
- A related insect, *Aphtona cyparissias*, was also released at the above site.

Staff assisted spread of the seed-head weevil *(Rhinocyllus conicus)*, infesting nodding thistle continued. An estimated 15,700 weevils were moved in 1982, through the co-operation of the Pembina-Manitou Weed Control District.

Herbicide Usage Planner — Telidon

In co-operation with Infomart, Herbicide Usage Planners were developed for Field Crops and Forage Crops, and placed on the telidon system Grassroots. The planners are interactive computer aids to assist farmers in selection of alternative controls for specific, complex weed problems. Highlights of the system include the consideration of sequential treatments, selection of recommendations for mixed forage stands, and availability of suggested retail prices for each recommendation. Ease of revision will assist in keeping recommendations up-to-date.

Interest shown by farmers at winter meetings, Weed Fairs and through individual usage will result in an expansion of information available for the 1984 season.

Weed Control Districts

Thirty-seven weed boards operated in 1982. Weed supervisors enforced the Noxious Weeds Act and assisted farmers and homeowners by extending weed control information. They made 3,901 farm calls, identified 2,620 weeds, calibrated 234 sprayers and carried out 1,842 inspections.

Manitoba Agriculture provided technical support to the weed supervisors, including two one-week schools and a correspondence course training program.

Weed Fairs

Two-day fairs at Brandon and Winnipeg drew a total attendance of 5,700. The Weed Fairs continued to provide one-stop weed information centres for farmers, with information also available on other pests, fertilizers and related equipment.

Concurrent program sessions and handout materials covered four themes — wild mustard, herbicide residues, safety and new information.

Dealer and Applicator Training

Educational programs covering weed control were continued for new dealers and custom applicators, as well as for dealers and applicators required to requalify for licences. Content of training programs included using the recommendations, new products, plant growth stages, spray drift, application

records, and vegetation management on right's-of-way.

Technical assistance was also provided to dealers and applicators through newsletters and phone calls.

Zero Tillage

Farmers used zero tillage production practices on 10,000 ha (24,710 acres) in 1982, representing no change from 1981.

Fifty-five per cent of zero tillage was carried out in the Southwest region, and twenty-nine and twelve per cent in the Northwest and Central regions, respectively.

Major farmer interest centred around the feasibility of winter wheat production and the soil conservation benefits of zero tillage. Problems associated with this production practice, as identified by farmers, continue to be weed control, seeding and fertilizer management.

Establishment of the North Dakota-Manitoba Zero Tillage Farmers' Association has resulted in active farmer participation in educational programs dealing with zero tillage. A successful workshop drawing 410 participants at Brandon was organized by the Association, with some organizational assistance from Manitoba Agriculture.

Engineering Services

Department engineers placed major emphasis on the training of weed supervisors, applicators and others, to enable them to do a better job of herbicide application and to reduce the incidence of off target spray drift. Various application methods were investigated and research information on application technique was accumulated to be passed on to farmers at field days, farm meetings and short courses. Sprayer adjustment, sprayer calibration and the proper use of herbicides were highlighted in these sessions. Individual assistance was also given to manufacturers on improvements to sprayer design, to farmers on sprayer component selection and sprayer adjustments.

Soil, Land and Water Management

In this area the Department carries out programs and activities related to basic soil resource information, soil management, land use planning and water management.

Soil Survey

The systematic inventory and evaluation of Manitoba soil resources is a continuing program supported jointly by the Manitoba Department of Agriculture and the Canada Department of Agriculture. The University of Manitoba, through the Department of Soil Science provides office and laboratory space and administrative services related to special projects on behalf of soil survey. The major function of the soil survey continues to be provision of essential soil resource data and related research and land evaluations required by provincial government departments representing a land use and planning function or a related administrative function.

The main emphasis of the 1982-83 inventory program focused on the detailed resurvey and land evaluation of selected areas in southern Manitoba. These resurveys at 1:20,000 scale provide detailed soil resource information to assist in the planning, allocation, and management of land resources for agriculture, rural residential planning and intensive outdoor recreational uses. Approximately 135,680 ha were surveyed at a scale of 1:20,000 in 4 selected areas of southern Manitoba. These projects included irrigation and agriculture studies near Roland, Ste. Anne and La Broquerie, Municipal Planning and assessment studies at Westbourne and 11 rural towns.

TABLE 16
Total Hectarage Covered

	1982-83	To March 31, 1983
Initial reconnaissance	—	18,617,436
Initial detailed survey	—	16,460
Detailed resurvey	135,680	1,677,409
Biophysical survey	—	12,521,000

Interim reports and maps are currently being prepared for all 1982 projects. In addition, the final report was released for The Pas area and interim reports were released for the Arborg-Riverton, Duck Mountain, and Western Interlake Planning District areas.

Current status of the soil inventory in Manitoba is summarized as follows:

- The continuing program of detailed soil surveys was shared among requests from the provincial government Departments of Agriculture and Municipal Affairs.
- Continued development of automated data handling capability for all cartographic information and supporting soil and related landscape data was compiled by the soil survey. This capability is designed to increase efficiency of the soil survey operation and to provide more quantitative soil data to users.
- There was also a continuation of land evaluation studies, primarily in agriculture. The soil survey is involved in developing a data base for land evaluation through the ongoing program of detailed resurveys and through long term monitoring programs of soil temperature, soil moisture and climate relations. Soil survey data provides input for the development of various soil-climate based crop growth and yield models for quantitative land evaluation.

Land Use Planning

Central staff and regional land resource specialists represented agricultural interests in subdivision and land use issues relating to the Planning Act and Provincial Land Use Policies. Assistance and advice was given to planning districts and municipalities in formulation of basic planning statements and development plans.

Investigative and consultative input was made in the areas of organic soil management, northern agriculture development, Crown lands, Hydro rights-of-way and assessment review.

Soil Fertility

The overall amount of fertilizer that was applied to the Province's cropland in 1982 was similar to that applied in 1981: 521 000 tonnes (581,000 tons) in 1981. The nutrients applied were 167 000 tonnes (184,000 tons) of nitrogen, 86 000 tonnes (95,000 tons) of phosphorus, and 19 000 tonnes (21,000 tons) of potassium. For the second year in a row, the summerfallow acreage was considerably lower than the preceding five year average; 0.59 million hectares (1.46 million acres) in 1982 as compared to 0.81 million hectares (1.99 million acres) for the period 1977 to 1981.

Notable fertilizer and soil fertility factors during 1982-83 year were as follows:

- The average soil nitrogen in the spring of 1982 was higher than normal; 59 kg/ha (53 lb/acre) nitrate nitrogen to 60 cm (24 inches) soil depth on stubble fields in 1982 as compared to 50 kg/ha (45 lbs/acre) for the previous five years.
- Soil test target yield recommendations for wheat, oats, and barley were revised taking into consideration soil moisture in determining nitrogen recommendations.
- Fertility topics of particular interest to producers included: (1) differences in fertilizer recommendations from various soil testing labs, (2) fertilizer placement, (3) revised target yield recommendations, and (4) soil fertility in horticulture crops.
- Revised target yield recommendations for grain and silage corn. Introduction of target yield recommendations for sunflowers. These revisions were the result of an Agro-Man project dealing with the fertilizer technology of special crops.
- Access to soil test results and recommendations via telephone by computer terminals located in the regions.

Fertilizer Investigations

Manitoba Agriculture established a number of fertilizer investigations and demonstrations. These included:

- Trials to observe the effect of different sulphur sources on the yields of forage crops.
- Trials comparing fertilizer recommendations from three different labs.
- Micro-nutrient trials on organic soils in the Interlake.
- The second year investigations of an Agro-Man Study to further develop the fertilizer technology of special crops in Manitoba was carried out by the Soil Science Department at the University of Manitoba.

Extension Activities

Presentations dealing with soil testing, fertilizer placement, fertilizer recommendations, salinity, nitrogen, phosphorus, potassium, sulphur, micro-nutrients, soils in horticulture were made at numerous locations throughout

the Province. A display relating to the Manitoba Soil Testing Laboratory was included in the 1982 Weed Fairs at Brandon and Winnipeg. The use of computer terminals to access the Provincial Laboratory was also demonstrated at a number of farm meetings in the Province.

Provincial Soil Testing Laboratory

Some 25,300 samples were received compared to 31,500 the previous year. An additional 9,400 samples from non-farm sources were received bringing the total soil sample volume to 34,700 as compared to a total of 38,100 the previous year. In addition, 1,350 plant tissue samples were analyzed compared to 1,900 in 1981-82.

The 20% decline in the number of farm samples recorded was due to unfavorable soil sampling conditions in the fall of 1982 and general poor economic farm situations.

The Provincial Soil Testing Laboratory continues to stock and sell "at cost" soil sampling equipment and soil thermometers to encourage proper soil sampling. During the year some $3,100 worth of such equipment was sold.

Soil drying cabinets were designed for commercial operators and for individual farm use.

Irrigation

The Land and Water Branch and regional staff provided technical assistance to irrigation inquirers. This included determining soil and water suitability and advising on the selection of irrigation equipment. Work was initiated to produce an Irrigation Handbook. Rebates totalling $62,505.83 were paid to 26 farmers under the Agri-Water program. An estimated additional 450 ha (1120 acres) were brought under irrigation in 1982, bringing the total irrigated area in Manitoba to about 11,100 ha (27,400 acres).

The major projects supervised by the Soil and Water Engineer were completion of construction and start-up of the Roblin Effluent Irrigation project and the construction of a pothole consolidation water management project at Boissevain.

On-Farm Drainage

Under the on-farm drainage survey program, surveys were carried out on 52 quarters section for 34 applicants. In addition, 15 quarters were surveyed or investigated for water management or subsurface drainage projects. Drainage schools were conducted for approximately 400 farmers at Piney, Riverton, and Altona.

In cooperation with the Peatland Farmers' Association designs were prepared and construction completed for a 12 ha (30 acre) raspberry farm on peatland. Development continues on adapting a computerized on-farm drainage design and plotting program.

Land Use Management

Conservation Specialists focused on two major aspects of soil management; erosion control and conservation tillage. Demonstration plots were established to evaluate the effects of various methods of fall tillage on erosion control and soil moisture conservation. One project was set up to illustrate methods of restoring mature and decadent shelterbelts to improve their efficiency. Staff work closely with PFRA Tree Nursery Station in planning and implementing field shelterbelts in Manitoba. One demonstration site for evaluation of tree species and spacing has been established.

Conservation staff worked closely with the five Conservation Districts in providing professional resource planning and program implementation. Through this program about 130 km (80 miles) of field shelterbelts were planted and some 18 000 ha (45,000 acres) of forage was seeded on erosion prone or low capability agricultural land.

In the engineering field a review of research information on tillage practices and their effects was made and presented to several farm meetings throughout Manitoba. An excessive amount of tillage is practiced in Manitoba and the detrimental effects of erosion, nutrient losses and high equipment costs were emphasized in these presentations.

Agricultural Crown Lands

Land Use

Agricultural Crown Lands utilize 0.78 million hectares (1.93 million acres) for livestock grazing, hay production and annual cropping. The Crown Land Classification Committee (CLCC) has been very active in processing land for the Crown Land Sale Program and the Local Government District Land Exchange Program.

Sale of Agricultural Crown Lands Under Lease

A revised Agricultural Crown lands sale policy was implemented August 11, 1982. The more significant changes and additions to the previous policy include:

- There is no longer a requirement that the land be held under lease prior to 1977. Any lessee who has held Crown land under an Agricultural lease for at least 2 years may make application to purchase.
- If a sale occurs within the first 3 years following the land transfer, any increase in value over the full appraised value of the land at the time of purchase will be shared with the Province on the basis of a sliding scale.

TABLE 17
Summary of Land Sales Activity — 1982

	1982	Cumulative Total for Program
No. of applications received	89	1,567
No. of applications approved by Departments	244	1,191
No. of applications rejected by Departments	124	440
No. submitted to Cabinet for approval	54	598
No. approved by Cabinet	202	693
No. offered for sale	241	826
No. of offers to purchase received	131	518

Leasing and Permitting

The total number of Forage Lease dispositions increased by 43 in 1982 and the total area under Forage Lease increased by 18,869 hectares (46,623 acres). In 1982 there were 58 In-family Transfers of leases involving 331 parcels of land. There were also 19 Unit Transfers in 1982 involving 108 parcels of land, compared to 12 Unit Transfers in 1981, involving 82 parcels of land. Voluntary surrenders were actioned on 139 leases comprising 288 parcels. There were 16 leases involving 41 parcels cancelled for non-payment of rent, and 9 leases involving 26 parcels were cancelled for non-use.

Total leases and permits in 1982 were as follows:

TABLE 18

Type	Number	Hectare	Acre
Forage Leases	2,680	641,451	1,585,003
Casual Grazing Permits	248	9,745	24,080
Renewable Hay Permits	1,348	73,693	182,094
Casual Hay Permits	477	23,985	59,266
Lease Option Agreements	8	892	2,204
Cash Rental Agricultural Leases	279	32,534	80,391
Special Leases	1	62	154
Totals	5,041	782,362	1,933,192

Advertisement and Allocation

During the year, 647 quarters were advertised for lease or permit. Of these, 240 quarters received one application only, and 143 quarters received no response. Multiple applications were received on 244 quarters and 20 quarters were withdrawn from allocation.

Agricultural Crown Lands Advisory Committee

A total of 110 allocation appeals involving 187 quarters were heard during 1982. The appeal hearings resulted in 85 (45.5%) of the allocated quarters being upheld and 102 quarters (54.5%) of the allocated quarters were changed. Two appeals were heard by the Committee regarding Unit Transfer requests which the Branch denied. One Unit Transfer was allowed and one Unit Transfer was denied. The Committee heard one appeal on a non-renewal of a Forage Lease. It was recommended that the lease be renewed.

Nine appeals against cancellation of forage leases were heard by the Committee. The Committee recommended that six forage leases be cancelled, and that cancellation proceedings on one forage lease be dropped. Decisions regarding two forage leases were deferred.

The Committee also reviewed two cancellation appeals that had their decisions deferred. It was recommended that the cancellation proceedings be dropped on one forage lease. Monitoring on the other forage lease was to be continued.

Purchase of Improvements

The purchase of improvements for the calendar year 1982 totalled $26,570.12. Crown-owned improvements for the value of $36,650.60 were sold to lessees acquiring lands in 1982.

Carrying Capacity of Grazing or Hay Lands

All lands held under Forage Lease were inspected for the purpose of setting the carrying capacity. In addition, lands held under hay permits are being inspected for the purpose of setting carrying capacities on these lands.

Crown Land Improvement Program

A fairly high demand for services under this program was caused by ideal weather conditions for clearing. Low livestock prices did not seem to have a negative effect on this program. In 1982, this program was made available to 172 new clients on 326 quarter sections, totalling $405,637 and 817 clients were carried over from previous years on 1,631 quarters totalling $299,818. In 1982, there were 2 941 hectares (7,269 acres) cleared; 3 840 hectares (9,489 acres) were broken; and 5 746 hectares (14,200 acres) were prepared for seeding for a cost of $705,455.

Twenty hectares (50 acres) were dormant sprayed and 411 hectares (1,015 acres) were re-sprayed. Total expenditure for this activity was $10,650.

Community Pastures — P.F.R.A. Administered

There are 24 community pastures covering 177 474 hectares (438,541 acres) in Manitoba. One emergency pasture was maintained from the 1980 drought (Libau) due to the severe winter kill of legumes plus field renovation. Patrons are charged a user fee to recover the annual operating cost of the pastures. Rates for 1982 were increased.

TABLE 19
Community Pasture Statistics

Operating pastures	24
Hectares (Acres)	177 474 (438,541)
Carrying Capacity	40,050
Patrons	1,206
Cattle & calves	58,528
Horses & colts	598
Breeding Cows	18,944
Losses	461
Overall percentage loss	.86
Bulls (includes rental)	755

Co-operative Pastures

The Shoal Lake Hay & Grazing Co-op Ltd. and the Ralph Conner Grazing Co-op are the only two co-operative pastures in the Province. Comprising 1 722 hectares (4,255 acres) 1 900 hectares (4,700 acres) respectively they are located in the Interlake Region.

Grassland Demonstration Projects

There were five Grassland Society Projects in operation on Crown land in 1982. No new projects were started during 1982, but The Pas Grassland Society had 31 hectares (77 acres) cleared and broken.

Tree Covered Rangeland Improvement Project

In November, 1979, the Agricultural Crown Lands Branch was charged with the respon-

sibility of the financial administration of the Tree Covered Rangeland Improvement Project of the Canada-Manitoba Subsidiary Agreement on Value Added Crops Production (Agro-Man). Interest rebate assistance is provided to farmers who borrow money to develop their privately owned tree covered rangelands through the land development stages of clearing, breaking and seed bed preparation, which is usually a two year period.

During 1982, 54 clients paid a total of $289,328 to contractors for work undertaken within this program. They borrowed a total of $253,063, resulting in interest rebates of $140,346 on the 1 091 hectares (2,697 acres) under development.

Insect Control

Department entomologists carry out activities to make people more aware of safe, effective methods of pest management and the potential hazards which could result from the misuse of insecticides. Servicing enquiries from field staff, dealers, applicators and farmers requesting insect identifications and control information is a major activity during the growing season. Economic threshold guidelines and control recommendations were provided in various bulletins and from May through August, 16 issues of the Manitoba Insect Report were forwarded, on a weekly basis to approximately 1,200 persons advising on, or directly involved in, insect pest management. Field surveys were carried out on a regular basis during the growing season to provide early warning of potential infestations of crop pests.

Surveys

Grasshoppers — Staff assisted Agriculture Canada personnel in carrying out adult grasshopper surveys to produce a 1983 forecast. The survey indicated that the 1983 area of infestation would be 50% lower than that experienced in 1982.

TABLE 20
1983 Grasshopper Forecast

	1983	1982
Light	1878 km² (725 sq mi)	4094 km² (1580 sq mi)
Moderate	502 km² (105 sq mi)	479 km² (185 sq mi)

The main areas of infestation forecast for 1983 were in Franklin Municipality and in areas near Stockton, Shilo, Deleau and Renwer.

Sunflower Midge — Staff cooperated with North and South Dakota and Minnesota personnel in carrying out a U.S. - Canadian Red River Valley survey to determine the severity and extent of sunflower midge infestations. Heaviest areas of infestation were in Manitoba's southern Red River Valley and North Dakota's northern Red River Valley with the center near Emerson.

Spruce Budworm — Fall eggmass surveys were carried out in conjunction with Natural Resources personnel. Results indicated that spotty, moderate to severe infestations of spruce budworms will occur in the northern Interlake and Hecla Island areas.

Forest Tent Caterpillars — Eggmass surveys carried out in the Turtle Mountain area indicated that no infestations would occur in that area in 1983. Infestations were expected in the Flin Flon and The Pas area.

Bertha armyworms — Field surveys were carried out in the Northwest Region to determine potential areas of infestation. No outbreak was predicted on the basis of the survey, and none occurred.

Field Research

Fly Control — A trial to evaluate the effectiveness of fenvalerate in controlling house flies around livestock buildings was carried out at the Gunton Grassland Project. Excellent control was achieved.

Sunflower Midge — Several varieties of sunflower strains in large plots within the same field were assessed at three weekly intervals to determine if some varieties might show tolerance to midge attack. There was no significant difference between the eight varieties. The assessment was done in conjunction with the Entomology Depart-

ment personnel at the University of Manitoba.

Sunflower Moth — Pheromone traps were placed in several fields in the Altona area. Pheromones, a sex attractant given off by the female moths, was soaked into a rubber septum which was placed in the middle of a sticky trap. No sunflower moths were caught in the traps.

Blackflies — Staff assisted University of Manitoba personnel in carrying out a methoxychlor evaluation trial of blackfly control on the Souris River in June 1982.

Pesticides Control

A total of 900 retail pesticide dealers and 200 commercial pesticide applicators were licensed in 1982 under the Pesticides and Fertilizers Control Act. The qualifications for licensing were the attendance at training courses and successful completion of written examinations.

Dealer and Applicator Training

Five pesticide dealer short courses and four pesticide applicator courses were held in early 1983, attended by 265 dealers and 250 applicators. Dealers and applicators completed supervised written examinations at the courses to qualify for licensing. Separate training and examinations are held for Pharmacists in cooperation with the Manitoba Society of Professional Pharmacists, and for Veterinarians in cooperation with the Manitoba Veterinary Medical Board. Training courses for applicators included aerial, ground, rights-of-way and landscape pest control.

A total of 44 dealers completed examinations for "Provisional" Pesticide Dealer's Licences, to be renewed only by completing full requirements for licences.

Dealers and applicators were provided with updated educational material on the control of insects, weeds, plant diseases and vertebrate pests.

Enforcement

Eighty unlicensed dealer outlets were visited and 29 were found to be in violation of the Act. Of these, 25 complied with licensing, one has been prosecuted, two are pending prosecution and the one remaining has been dropped from further action.

Thirty-eight investigations were made into alleged damage to crops, shelterbelts and gardens. Thirty-seven involved aerial applicators and one involved a ground applicator. All complaints involved herbicide damage.

Pesticide Residue Testing Program

A monitoring program for pesticide residues in agricultural products continued in 1982 under the direction of the Committee on Pesticide Residue Testing. A total of 326 samples were analysed. One serious contamination of lindane in poultry as a result of use of left-over treated seed was found and corrected. Investigations are carried out on serious contamination problems with the objective of correcting the problem at the source and preventing further problems.

Insecticide Supply Program

The insecticide inventory at the beginning of 1982 was 996 twenty litre pails of dimethoate and 665 gallons of malathion. The last of the dimethoate was sold in July, no further purchases were made and the insecticide supply program was discontinued.

Vertebrate Control

The objective of this activity is to assist municipalities, farmers and others in reducing losses from vertebrate pests. The major responsibility of the Vertebrate Control Officer was to coordinate a rat control project in eastern Manitoba and to train and provide technical back-up for Rat Control Officers (RCO's) appointed by municipalities.

Because of budget constraints, the position of Vertebrate Control Officer was terminated at the end of March, 1983.

Training and Development

Farm Management

Farm management activity was designed to improve the efficiency and growth of the farm business through provision of farm management services and by extending information to staff and to farmers. Major activities of the year focused on the development of Farm Management '83, farm records, computers and their use in extension, staff training in farm management and resource development for on-going farm management programs.

Further improvements were made to the new farm account book — Farm Records for Farm

Managers. Provincial and national distribution of this book was coordinated throughout the year resulting in 10,000 copies being distributed across Canada, both in English and in French. The University of Manitoba and several federal departments were most supportive on this project.

Extension and Development

An increasing response to the need for cost of production figures prompted staff to produce and widely distribute eight different Information Updates on production costs for crops, hogs, cow-calf, finishing beef, dairy and hay production. Additional discussion papers were prepared and delivered on costs of production of soybeans, strawberries, vegetables, small fruits and greenhouse corn. Another publication, Sources of Credit for Manitoba Farmers, was revised and updated.

A major staff emphasis centered on the development of the course content for the homestudy course Farm Management '83. Eight lesson books and a workbook were developed. Subjects covered included; managing a farm business, principles of farm management, farm records, financial statements, planning, marketing, financing, and farming and the law. Two publications, The Farmer and The Law and Sources of Credit were sent to all participants, along with six information updates. Some 3,000 Manitoba farmers registered for the course and subsequent farmer evaluation showed Farm Management '83 to be most effective.

During the year farm management staff were heavily involved in developing and monitoring computer technology for departmental use. Farmers have shown an increasing interest in computer use for farm records keeping and for decision making. Most popular and useful computer programs proved to be on cash flow projections, buy vs hire of machinery, buying vs renting land, crop budget analyzer, loan calculator, and other financial planning aids. Staff participated in an internal committee on implementation of computers in extension.

Central farm management staff were responsible for facilitating, developing and training departmental staff in farm management. This resulted in a total of 56 staff registrations for the various levels of training, including a workshop on the legal aspects of bankruptcies and receivership.

During the year staff were actively involved in The Manitoba Indian Agriculture Program, the Committee on Northern Agriculture, the Farm Management Strategy Committee and the Western Farm Management Extension Committee. Liaison was also maintained with agribusiness, banks, credit unions, caisse populaires, other financial institutions and the University of Manitoba.

Regional Activity

All five agricultural regions reported a dramatic increase in the demand for the services of farm management specialists and agricultural representatives in the farm management areas. Difficult economic times prompted this demand. The Interest Rate Relief Program brought in by the Manitoba Government to help producers survive this period generated an unprecedented volume of requests for intensive financial counselling for farm families. In each region many hundreds of such counselling sessions took place. In most cases these resulted in adjusted or new approaches to maintaining viability of the farms involved.

In the Northwest region over 500 clients were counselled under the Interest Rate Relief Program. Many other producers were counselled and advised on topics ranging from improved farm records and farm resource management, to commodity group programs, farm business arrangements and the use of computers in agriculture.

The Southwest region reports over 500 formal appointments related to the Interest Rate Relief Program and numerous clients requested the same kind of business analysis on their farm operation. Extension programming was carried out with farm business groups on a wide range of management topics. Telidon units in the region proved to be an effective tool in farm management work, as were the computer terminals and the data bases they are able to access.

Intensive financial counselling was also the main farm management thrust in the Central Region during the year. The unusually large workload was shared between the agricultural representatives and farm management specialists. It was noted that very good cooperation was experienced between the department and lending institutions involved. Farm business group programs were actively supported and considerable marketing extension was carried out.

In the Eastern region the same economic conditions prompted a rapid increase in detailed financial counselling of farm operators in financial trouble, and others who requested a similar service. Over 200 farmers took part in nine farm business planning sessions covering production economics,

marketing, retirement planning, estate planning and money management. Computer use in farm management recieved increased support.

Heavy interest in the Interest Rate Relief Program, and associated projects, was also evident in the Interlake region. The counselling involved gave staff an excellent opportunity to carry out in-depth business analyses with a large number of farmers. Regional programming in Farm Management included emphasis on financial management, survival strategies, record keeping, income tax, marketing and sound business practices.

Agro-Man

Farm management staff participated in and assisted many of the Agro-Man projects including:

- Project 201 — The economics of growing corn.
- Project 202 — The economics of growing soybeans. Indications are that a higher yielding variety is required for profitable Manitoba production.
- Project 410 — Investigation and demonstration of irrigation technology using effluent.

4-H and Youth

The objective of the 4-H program is to encourage and promote leadership development amongst young people in rural and northern Manitoba, through the adoption of the necessary skills, attitudes and knowledge.

Working as part of a district 4-H council of volunteer leaders and members, agricultural representatives, home economists and 4-H program assistants are responsible for local 4-H programming. They are supported by regional 4-H specialists and regional 4-H councils, and provincially by the Winnipeg 4-H Office and the Manitoba 4-H Council.

Provincial Activities

The central 4-H office in Winnipeg is responsible for all provincial, national and international activities. In addition this office provides support services to regional and district 4-H staff and the Manitoba 4-H Council and directly supervises the northern 4-H program.

The Manitoba 4-H Council is much involved in guiding policy for 4-H in Manitoba and providing the assistance on program planning and staffing of exchange visits, conferences and promotions. The Council, consisting of six 4-H leaders, six 4-H members and two government representatives has three major goals. They are:

- to improve volunteer participation and learning
- to encourage participation and support from corporate sponsors
- to enhance national and international 4-H relationships

Staff and volunteers planned and implemented over 25 National and Provincial events, involving over 400 members and 100 leaders.

The Annual 4-H Conference was a major opportunity for all Districts to give direction to the 4-H program. About 100 leaders, senior members, staff and out-of-Province delegates attended. Training of volunteer leaders was a high priority. Another 200 leaders took the first level of the Head Leader Management Course, and 120 participated in the second level given in Brandon and Gimli. Work started on materials for a Project Leaders Course. In another major event over 200 members and leaders participated in the fourth Provincial 4-H Horse Show in Brandon, held in conjunction with the Provincial Exhibition Board and the Manitoba Horse Council.

Through donations and sponsorship, Manitoba 4-H Council organized a variety of travel opportunities to 4-H activities within and outside of Province, for 51 leaders and 123 members. Over 100 members and leaders travelled on the Open House Canada Program. The Canadian 4-H Council coordinated hosting and travel arrangements. 4-H members and leaders attended conferences and activities in Ontario, North Dakota, Minnesota, British Columbia, Saskatchewan, New Brunswick, Alberta and Washington D.C.

Using the slogan "Grow with 4-H", an extensive program was organized to promote 4-H. Activities included the declaration of the National 4-H Week, a proclamation signed by the Minister, promotional materials (stickers, cards, labels, press kits) and T.V. and radio spots during public service time.

The 4-H Ambassadors increased their involvement in rallies, fairs, workshops, and public speaking events. In co-operation with the Kiwanis Club of Winnipeg, they organized the Provincial 4-H Public Speaking Competition, at which the Lieutenant-Governor was a judge.

Four issues of the provincial 4-H magazine, CONTACT, were distributed to over 500 4-H families.

Scholarships were awarded by the Canadian National Exhibition and Hoechst Canada.

Outside of the 4-H program, the Office assisted a group of young people from across Manitoba to organize the first Manitoba Rural Youth Conference in Winnipeg. 63 Young people (ages 19-30) attended and set up a new body called the Manitoba Rural Youth Organization.

4-H Projects

The Department supplied project manuals and record books to a project enrollment of 6,775. Membership enrollment increased to 6,072 members in 320 clubs, and volunteer leaders to 2,180. New materials provided this year included:

Beef — All members (approximately 972) studied Feeding using the new lesson materials; started writing material for next three Units.

Clothing — Unit III was printed and distributed; started writing material for Clothing IV.
Provided Simplicity Sewing Books for reference material to project.

Exploring 4-H — New project for 9-10 year olds and leaders guide.

Foods I — Revised.

Photography — New units were supplied by Kodak.

Handicrafts

III & IV — New project material developed and printed.

Leadership

Materials — Reprinted for general distribution.

Other materials for projects and general activities were reprinted according to demand and some were ordered from other Provinces and the United States.

Staff Training

All of the 4-H Specialists participated in the various provincial and national activities. Five staff meetings were held. All staff attended the Western Provinces 4-H Staff Meeting in Manitoba, two attended the Winter Extension School in Arizona, two took the Extension Evaluation Seminar in Gimli, and two participated in the Home Economists Training Workshops. A joint session for over 60 4-H assistants, agricultural representatives and home economists was organized by all staff in the early fall.

Northern 4-H Program

Enrollment in the 4-H program has continued to increase with clubs active in The Pas, Carrot Valley, Easterville, Grand Rapids, Flin Flon, Moose Lake, Cormorant, Cranberry Portage, Wanless, Thompson, Leaf Rapids, Shamattawa and Split Lake.

A variety of projects were undertaken by the members and leaders including several group-determined projects. Examples are beadwork, make-up and grooming, Artex painting, Chinese cooking, and adopt-a-grandparent by mail. Flexibility in project work requirements is necessary due to limited resources and differing lifestyles in remote northern communities.

In addition to local project group meetings, members participated in regional activities. Twenty-two members attended Camp Wannakumbac during the 1982 summer camping season. Twenty-four members shared ideas and friendship in a Junior Members' Conference held in March at Cranberry Portage. The conference was entitled "A World of Words, Thoughts, and Actions" and it focused on the area of human communications. Following the Regional Public Speaking Competition in Thompson, winners in the senior category travelled to Winnipeg for further competition in the Provincial Public Speaking Event. Members also enjoyed a meeting management workshop, babysitting course, dog care clinic, and a clowning workshop.

Leader training and development improved with two leader management workshops, program planning meetings, the formation of a leaders association in The Pas and representation on the Manitoba 4-H Council. There has been expanded communication between leaders with the introduction of a northern leaders' monthly bulletin. A leader delegate was able to share experiences and ideas with other 4-H leaders in the province by attending the Annual Meeting of Council, March 1983, in Winnipeg.

Raising the quality of programming in existing 4-H Clubs and promoting The 4-H program in remote communities remain the priorities of the Northern 4-H Program.

TABLE 21
Manitoba 4-H Statistics

PROJECT	1982	1981
Group Determined	200	158
Babysitting	124	132
Adopt-A-Grandparent	71	62
Mechanics	236	208
Beef Calf	972	1136
Dairy Calf	112	120
Garden — Horticulture	97	107
Junior Leader	97	93
Light Horse and Pony	801	761
Cereal Crops	46	14
Conservation — Outdoor Living	249	206
Exploring 4-H	274	—
Sugar Beets	68	68
Swine	32	35
Woodworking	430	436
Photography	175	170
Dog Care and Training	42	17
Power Toboggan	20	14
Self Determined	119	119
Home Nursing	29	32
Electrical		19
On Your Own	58	59
Clothing	996	1047
Foods	722	809
Home Design	65	93
Handicrafts	635	892
Leathercrafts	40	45
Other	65	63
TOTAL PROJECT ENROLLMENT	6775	6915
No. of Male Members	2148	2055
No. of Female Members	3924	3870
TOTAL NUMBER OF MEMBERS	6072	5925
Number of Clubs	320	312
Number of Leaders	2180	2139
Number of New Leaders	681	676
Number of New Members	1928	1891
Average Age	12.1	12.1
Average Tenure	2.9	2.9

Regional 4-H Activity

All regions carried out an extensive and comprehensive program at the district level. Activities were varied and wide ranging, including sporting events, camps, rallies, member training, leader training and project work. All regions reported a high level of activity in 4-H throughout the year.

The Southwest region experienced their highest 4-H membership since 1978. Leadership training was emphasized, along with member workshops in beef, clothing, handicraft, horsemanship and special learning opportunity sessions. Public speaking was

the most popular regional program, but the camping programs, junior and senior conferences and exchange trips provided highlights for many members and leaders. Of special note was a centennial "old time rally" staged by 4-H in conjunction with the 100'th annual Brandon summer fair.

District and regional 4-H councils in the Northwest region played an active role in planning and coordinating activities for the more than 1000 members in the region. Extensive use of media was noted in promoting and providing coverage of 4-H events. Major activities included three rallies, four officers' workshops, numerous achievement programs and special evening programs.

The full program for the members of the 85 4-H clubs in the Central region was aided greatly by the enthusiastic assistance of 4-H ambassadors, district and regional 4-H councils and the 4-H program assistants. Program assistants continued with regular training sessions, which encouraged a sharing of program ideas. There was renewed interest in the 4-H camp program and evaluations of that program were most positive. Thirty-one members took part in award trips during the year.

In the Eastern region strong support for 4-H activities was developed through promotions in schools, playground groups, mall displays, community awareness programs and through mass media. Major group educational activities included over 100 meetings, nine training workshops, five major conferences, public speaking contests, and achievement programs.

Regional and district 4-H councils were active in the Interlake region in assisting department staff in planning and carrying out most 4-H activities. Leadership training was emphasized and many of these sessions were related directly to specific project topics. Meeting management, public speaking, demonstrations and other specific projects were covered in a series of district workshops. Newscolumns and newsletters were used extensively to promote and cover 4-H events. Other activities included 4-H promotion in schools and malls, 4-H week activities, picnics, bonspiels, pot luck suppers, fund raising events and community service activities at the district level.

Rural and Northern Home Economics Services

Home Economics services are delivered in rural and northern Manitoba by home economists with Manitoba Agriculture and the Department of Community Services and Corrections. Their work is supported and integrated with activities of the Home Economics Directorate of the Department of Health.

The difficult economic conditions facing many rural families prompted home economists in all regions to place an increasing emphasis on money management and related topics. Programs in this area were generally well received, as were projects involving nutrition, clothing, housing, 4-H and leadership training.

Money Management

All regions experienced a dramatic increase in interest and participation in programs related to financial management. Group activities were well attended in some regions, while in others individual counselling was most popular.

Money management courses were the most prevalent group activities in this area of interest, but other courses offered included credit, wills, retirement planning, home budgetting, record keeping and life insurance. A number of farm couple seminars were organized with the agricultural representative in conjunction with the Farm Management '83 course.

Increasingly the home economists are being seen as a source of information and guidance on money management topics.

Nutrition

This is a well established aspect of the home economics program and continues high on the list of priorities in each of the five regions. All nutrition programs were designed to improve health and where possible to lower costs.

The majority of consumer calls had to do with food preparation and food preservation. Safe food preservation was featured in a number of seminars, workshops and mass media items.

A very extensive series of nutrition classes was carried on across the province on topics that included courses for prenatal, pre-school, school age and senior citizen groups. In addition, numerous classes covered food purchasing, food preparation, food preservation, entertaining on a budget, nutrition and weight loss, heart health, micro-wave and Wok cooking.

Clothing

Clothing buymanship and extended care of purchased and home produced garments continued to draw the interest of many homemakers. All programs were intended to help consumers dress themselves and their families in fashionable, durable clothing at reduced cost.

Instructional sessions in this area included numerous courses on fabric selection, clothing construction, basic sewing, tailoring, sewing with denim, lingerie, remodelling and using leftovers.

Housing

Home economists in the regions provided an ongoing advisory service related to housing matters. Most calls were related to renovation, house planning, home decoration and government housing and development programs.

While courses in this area were limited, several were held on such topics as wood heating, basic carpentry, energy wise decorating and home energy conservation.

4-H Support

4-H continues to be an area of active on-going involvement for home economists, in reaching rural youth and developing community leadership. This involvement comes through such activities as achievement programs, rallies, exhibitors schools, workshops and general support and assistance to 4-H staff. Other instructional events have included metric workshops and stress management seminars.

Agricultural Extension Centre

The Agricultural Extension Centre continued to provide facilities for adult education and extension training activities for rural Manitobans. Office space was also provided for Manitoba Agriculture's South-West Regional specialists staff, the Brandon district Agricultural Representative, and Central specialists in dairy, conservation, grain handling and transportation and the Manitoba Beef Commission. A wide range of government and other organizations use the facilities for educational meetings. In the fiscal year period, 828 seminars of one day or over, not sponsored by the Ag. Centre attracted 25,760, an increase of almost 2,000 over 1981 - '82. The attendance of Centre sponsored courses was down somewhat, reflecting the general slow down in Agriculture.

The Agricultural Extension Centre has residence accommodation for 92 people, a cafeteria style dining room for 200 and classrooms of various sizes which will accommodate a total of 450 people at a time. During the year a total of 5,932 people were housed in the residence and the cafeteria served 28,634 meals. The Ag. Centre continues to be the most used, by the public, of any provincial government building in Manitoba.

Course instructors for Ag. Centre programs came from Manitoba Agriculture, Ag. Canada and University of Manitoba staff. In addition, Brandon University, Universities in Canada and the United States, and in particular producers from Manitoba and elsewhere provide resources for the courses throughout the year. Several new developments highlighted this year's activities. In cooperation with the Ecological Farmers Association, the Centre held a 2 day seminar on "Another Way of Farming". New courses on cost cuting and "decision-making on the farm" proved popular. A special evening homecoming for former students and staff of the Agricultural and Homemaking School (now the Ag. Centre) was held in October. A new logo for the "Ag Action" listing of courses was prepared and a bulk mailing arrangement for this listing saved $2,000.00 in postage during the course season.

Registration at 24 Centre sponsored courses was 2,191. However, because only one registration per family was required the actual attendance was considerably higher.

Publicity and Outreach

The Centre's publication "Ag Action" published monthly, proved to be the most important pre-publicity medium. Items recorded for press, radio and television were a valuable extension of the Centre's activities. Excellent cooperation was received from all media in promotion and coverage of events. Portions of several courses were video taped for added coverage. Special crops courses were held at Shoal Lake and Virden in cooperation with South West regional staff. Copies of daily proceedings were provided to all course participants. All courses were evaluated by short questionnaires completed by participants.

Agricultural Manpower Service

This service is administered under the Federal/Provincial Agricultural Employment Development Agreement. Some general direc-

tion comes from the Manitoba Agricultural Employment Development Committee established under the Agreement. Regular contact and co-operation with regional personnel both federal and provincial is maintained. More specifically, duties related to this committee are:

1) Assisting in the organization of surveys, seminars, and studies relating to agricultural training needs of farmers and workers, and to assist in the initiation of training programs.
2) Participation in determining supply and demand of farm labor and developing appropriate training programs.
3) Co-operation with Departments of Education and Agriculture personnel in determining location and content of training programs.
4) Co-operation with regional personnel in the monitoring of agricultural training under G.I.T. (General Industrial Training).
5. Review, print and distribute guidelines and information on employment standards, personnel management, employer employee relations, and workers compensation as related to agriculture.

Agricultural Training

The Canada Manpower Training Program (CMTP) is now used for training programs developed and delivered exclusively for farm workers or for an applied agriculture course offered through Assiniboine Community College. Manitoba Agriculture has responsibility for reviewing the production content of these courses.

Agricultural training courses for farmers are now done entirely outside C.M.T.P., that is, no training allowance paid. Most courses (seminars, workshops, meetings) are no more than two days in length. Frequently departmental staff are the main resource.

Training courses delivered through Assiniboine Community College but requested through Manitoba Agriculture are shown in Table 22.

About one hundred training contracts were signed under General Industrial Training.

TABLE 22
Non-C.M.T.P. Courses

Course Name	No. of Courses	Attendances
Welding	16	228
Welding (evening)	11	130
Electrical	4	45
Small Engine Repair	5	73
Large Equipment Maintenance	3	29
Hydraulics	5	52
Mechanics	4	38
Advanced Grain Marketing	9	136
Farm Accounting	7	81
Air Conditioning (farm equipment)	7	79
Home Gardening	4	60
Farm Recording Keeping & Analysis	6	81
Beef Production	3	22
Crop Production	4	35
Rockwood Institution — Ag Modules		51

C.M.T.P. Courses

Farm Worker	3	36
Dairy Herd Worker	1	8
Introductory Farm Management	1	12
Applied Agriculture (4 months)	2	41
Dairy Herd Manager	1	9

Portage Farm Labour Project

The following courses were offered under the Portage Farm Labour Project:

• Basic Agriculture	3 weeks	15 people
• Supervisory Management	2 weeks	10 people
• Machinery Maintenance	15 evenings	9 people
• Truck Driving (to class 3 with air brake endorsement)	3 weeks	10 people
• Farm Works Seminar	3 days	225 people

This project was funded entirely by federal funds and is assured funding through to October 1983. Provincial assistance is provided through one staff person whose work on it is cost-shared through the Federal/Provincial Agricultural Employment Development Agreement. The program has involved residents from both The Headingley Correctional Centre and the Portage Correctional Centre for Women. Total employment at peak of harvest was around 300 employees on six major vegetable farms. This total included some of the potato harvest employees.

Offshore Workers

While 40 workers from Mexico were scheduled to come to Manitoba in 1982, only 37 arrived in the Portage area and three returned home early in the summer.

Agricultural Exchange Program

Through the International Agricultural Exchange Association 106 trainees arrived in Manitoba during 1982. A four day orientation was held in April, immediately after their arrival. The trainees then worked on Manitoba farms from April to October, with the exception of a three week vacation to tour North America.

Agricultural Societies

Manitoba Agricultural Societies have been contributing to rural communities and the Province from the days of early settlement. A number of them have reached their 100 year mark. The centennial year of agricultural societies is recognized by the Manitoba Government with the presentation of a suitably inscribed bronze plaque. To date 13 Agricultural Societies have qualified for this presentation. The seven Societies honored in 1982 were: Springfield (Dugald), Beautiful Plains (Neepawa), Turtle Mountain (Boissevain), Killarney, Minnedosa, Provincial Exhibition (Brandon) and Holland.

In 1982 some 64 Agricultural Societies were active in Manitoba. While they carried out their traditional operation of local and regional fairs and exhibitions, they were also active in sponsoring and supporting a wide range of community events.

Manitoba Agriculture provides support to Agricultural Societies through various grants. Building grants for new buildings and grounds maintenance amounted to $50,000 for two Class "A" and $42,000 for six Class "B" Societies. An amount of $49,140 was allocated to 44 of the 56 eligible Class "C" Societies.

Agricultural and homemaking classes and displays received prize money support amounting to $60,500 for Class "A" Fairs, $39,234 for Class "B" Fairs and $109,043 for Class "C" Fairs.

Each year a number of Manitoba livestock producers show animals at the Canadian Western Agribition at Regina in November. A grant of $5,500 was provided by the Manitoba Government to assist with prize money.

To mark Manitoba's Century Farms, Manitoba Agriculture made available farm gate signs and certificates that were awarded to families that had owned and operated a farm continuously for 100 years. During the year 155 families were presented with Century Farm Awards.

Horse Race Meets

During the year, harness horse racing meets were held at Portage la Prairie, Carberry, Crystal City, Deloraine, Glenboro, Holland, Killarney, Rossburn, Russell, Wawanesa, Dauphin, Carman and Virden. Each Society was supported up to a maximum of $10,000 per day. This was made possible through the retention of monies collected from parimutuel betting, plus a supplemental grant of 2½% of the total betting pool. The total supplement grant was $28,519.28. The parimutuel tax retained was $85,557.84.

District Conferences

Traditional conferences were replaced this year by a central annual convention for delegates from all societies. This event was held in November at the Extension Centre in Brandon. Representatives from societies gathered to hear speakers, hear reports, discuss problems and consider programs for their respective communities.

Newsletters

A Newsletter containing current information regarding Agricultural Societies was circulated to Home Economists, Ag. Reps, and Agricultural Societies on three occasions during the year.

Bursaries

A two hundred dollar bursary is made available each year from the Agricultural Advisory Board for a student entering First Year Agriculture. It was awarded to James Lindal, Fisher Branch. A similar award for First Year Human Ecology went to Leah Marie Tolton, Oak Lake. To be eligible students must enter the Degree courses at the University of Manitoba. The Agricultural Society provides a recommendation for each applicant along with the application.

Manitoba Agricultural Museum — Austin

The Manitoba Agricultural Museum, which has grown rapidly over the past few years, is managed by an administrator and staff, supplemented during the summer months by STEP students. The students act as tour guides and provide assistance with restoration work. The Museum attracts visitors from all parts of the world throughout the summer months. To maintain and preserve some of the early methods of harvesting a popular four day Thresherman's Reunion is held in late July of each year.

Revenues from the reunion and the casual visitors assist in maintaining the museum. Operating and maintenance grants from Manitoba Agriculture in 1982 - 83 amounted to $120,000.

Keystone Centre

The Keystone Agricultural and Recreational Centre, built in 1973 in Brandon serves the agricultural, recreational and entertainment needs of Brandon and surrounding districts. The Provincial Exhibition each year, makes use of the facilities in staging the Royal Winter Fair, Provincial Exhibition (summer fair) and AG-EX (fall fair). Many organizations use the facilities for recreation and entertainment. Breed Associations and invididual producers use the Centre for shows and sales through the year.

Under the Keystone Centre Agreement the Province of Manitoba and the City of Brandon share equally in any operating deficit. In 1982 there was an operating surplus of $56,046 which was applied against the cost of the new addition to the Centre. A building grant of $25,000 was provided to assist with capital improvements.

Womens Institutes

Another very successful year was completed by Manitoba Womens' Institutes. There were 106 active local institutes with a combined membership of 1802. During the year institute members focused on the following programs; 4-H Clubs, community concerns such as wife abuse, pornography on T.V., foreign ownership of land and land speculation, education financing, school lunch programs, pension legislation and the Garrison Diversion. Other programs included soils and soil conservation, shoring up the family and confidence building for women. The Provincial Board works very closely with the Home Economics Directorate and in the field with District Home Economists. Manitoba Agricultures' grant to the Womens' Institutes in 1982 was $31,000.

Manitoba Farm Vacations Association

This association, organized in 1972, provides the opportunity for non-farm people, both young and old, to enjoy a farm vacation. Visitors living on a farm learn first hand about farming and food production. Farm families gain the opportunity to tell the story of farming to non-farm people, they supplement farm income in a small way and enjoy the added social contacts.

During 1982 there were 56 active host families in the Manitoba association, hosting a total of 5,568 visitors. Over 300 school tours involved 20,096 students, many of whom were making their first visit to a farm. A Provincial grant of $23,000 was provided to support the Farm Vacation Program.

Agricultural Hall of Fame

The Agricultural Hall of Fame was established in 1976 as a non profit corporation designed to formally and publicly recognize

individuals who have made outstanding contributions to agriculture and rural living in Manitoba. Since its inception, the Hall of Fame has inducted 42 pioneer men and women on to its honor roll. The Hall of Fame gallery and office is located in the Keystone Centre in Brandon.

Manitoba Agriculture's grant to the Hall of Fame for 1982 was $11,668.

Community Resource Centre

The Centre is located at Brandon University and is operated as a research and advisory service to help in the building and rebuilding of rural communities. It assists individuals and groups in studying problems and opportunities in their areas. Local participation is encouraged in all planning and development phases. In 1982-83 the Centre received a grant of $25,000 from the province.

Manitoba Safety Council

A grant of $15,000 was made to the Manitoba Safety Council to assist with the expansion of a farm safety training course. Farm accidents and the evident need for farm safety educational programs, were of major concern to the Manitoba Safety Council during the year. Instructors and courses were made available throughout rural areas.